

COÖPERATION IN DENMARK: EDUCATING THE FARMERS TO RULE THE NATION: BY JACOB RIIS



N one of my visits to my old home in Denmark I became interested in the religious awakening which since my childhood had divided that country into two camps, popularly known as the "Happy Christians" and the "Hell Preachers." One day I happened to comment to a neighboring farmer upon the fact that among a people famous for making the best butter in the world I had only an indifferent article on my bread for breakfast. "Ah," said he, "you get it at the wrong place. If you would have good butter, you must go to the Happy Christians; they make the best." Now, this farmer, as far as I could discover was neither of one camp nor the other. His horizon was just butter. He merely stated a fact of his own observation. He was himself, industrially, the product of a movement as remarkable as that which had engrossed my attention, and quite unconsciously he connected the two. He knew the fact, that was all. Yet the connection between the intellectual and moral arousing of the Danish nation, and its evolution from dull poverty into thrift and unexampled prosperity, is singularly direct and convincing. The connecting link is the system of popular high schools which the Encyclopedia of Education in a recent volume characterizes as a "distinctive contribution to educational methods." It is that beyond all doubt.

The father of these schools was a clergyman of fiery convictions and commanding personality, born to indignant protest in the years of callous rationalism that followed in Europe upon the Napoleonic wars. His very first sermon, preached from the text: "Why has the spirit of the Lord forsaken His house," though he mentioned no names, caused six parsons with fat livings in the city of Copenhagen to complain to the Government. His next collision with the established ways brought him a fine for libel and placed him under police censorship for ten years, a streak of good luck as it proved, for in disgust he forsook the pulpit and took up the pen that was to bring him renown as the foremost historian, poet and educational leader of his day and country. A new note came into the Danish hymn-book and

WHERE THE FARMERS ARE THE RULERS

into the people's songs, a fresh free wind blew through the musty halls of Danish theology. Restored in the end to the pulpit, he lived to see the old fetters burst, a free kirk established within the national confession and himself crowned by a grateful Government with high honors as titular bishop. "The stone which the builders refused has become the head stone of the corner."

But office and honors were of small moment to Nikolaj Frederik Severin Grundtvig. Prophet that he was, he had set out to arouse his people, nationally and spiritually, and the way of doing that he conceived to be a school, or a system of schools, for young men and women in the vital years between eighteen and twenty-five, where they might find themselves and their country, learn to know and to love it and its mother tongue, learn, too, to love their work, whatever that might be, through "the living word." Books were dead things, after all, and he cast them aside and sought for men to help him, men who could help their pupils to think in an orderly way and to speak their thoughts clearly, *teachers who loved and could sing the people's songs*, and could put before them the history of their country so that it lived in their hearts. The demand for a free constitution was stirring in Denmark. He left that to others; of what use was freedom, he asked, without a people fit to appreciate it and the science and the learning which the State had fostered? Instead of a blessing, it might easily become a curse to the land. It is not the first time song has helped a nation to freedom.

In his search he came across one who like himself had been rejected by priest and dean. Kristen Kold was the son of a shoemaker, by nature so clumsy that he could not learn his father's trade, so, he used to say, he was left to become a schoolmaster. But though he could neither cobble nor learn the musket drill as a recruit, his soul was afire with an ideal, and by its torch he could kindle the souls of other men. He had been driven into exile when he refused to teach the children the long answers in the catechism which the official censor required; that they knew it all by heart was nothing to him: they must be able to repeat them like so many parrots, cry they ever so hard over it. Kold refused to take that view of it and left. To Smyrna he went with a missionary, but he had hearkened to Grundtvig's call to service and he came back, trundling his poor belongings on a wheelbarrow all the way from Trieste to Denmark. And when the two men met, the victory was as good as won. They were joined soon after by a third, Ludwig Schroeder, who gave direction to the movement and was for a generation the leader of the most important of the schools that were launched in the forties of the last century, schools that have made the Danish farmers of today.

WHERE THE FARMERS ARE THE RULERS

TODAY there are eighty or more of the people's high schools in Denmark, and more are being added as chance offers. Only the other day I received the provisional budget of one just organized. They are not state schools, though they receive state grants in our day. Sometimes an individual starts one, and again it may be a stock company. The purpose, however, is never to make money, but to *make men*. It was estimated not long since that twenty per cent. of the whole farming population in Denmark between twenty and fifty years of age had passed through these schools; for though they were not intended to be class schools, but for general civic development, the cities have contributed but a small quota of their pupils. It was Grundtvig's belief that while in the plastic years of youth history and religion are the studies that above all others fill the mind with new and inspiring ideals, the practical side of the man must not be neglected. He should have such special training as would help him to improve his living conditions, and as farming is the ordinary pursuit of the Dane, it fell out naturally that the instruction took this turn, and that by degrees there grew up besides the high schools a system of agricultural schools which, though distinct, have gone hand in hand with them since. Of both, the Christian faith and the national life form the basis.

A session of one of the high schools leaves no doubt of the awakening in the visitor's mind. Always the teacher's personality is in evidence, and the development of character in the individual as the one end in view. Practically all the teachings are by word of mouth, by lectures and talks with the students through which it is made clear that they have understood the lesson. Other examinations there are not, either at the beginning or at the end of the course. All that is merely mechanical is banished. The lecturer uses no manuscript; unless he can catch and hold the undivided attention of his class by addressing them directly, he is not the man for the place. The students take no notes, and text books are very few and brief. By contrast, the school song-book bulges; half of the songs in it have to do with Danish history. Every "talk" begins with a song and ends with one. And these young people can sing. Denmark had forgotten her songs when Grundtvig tuned his lyre and awoke the echoes of the heroic past; but today one hears the old folk-songs in field and highway.

Danish history and the mother tongue come first on the list of subjects taught, with Bible history. The day begins with prayers and runs on through busy hours with visions of world history, mythology, chemistry and physics. Mathematics come in for their full share, geology, English and German, too. The day is broken, now and then, for brief rests and an hour in the "gym." Sundown sees the school

WHERE THE FARMERS ARE THE RULERS

assemble for the last talk of the day, usually on some present-day topic of wide historic interest. No time is wasted, for the season is short: five months in winter for the men, three in the summer for the women, when the men are needed in the field. The students live in dormitories, the girls with their teachers, as plainly as if they were in their own homes. The fees are so low that poverty prevents few from attending, and for these the Government provides, if necessary. The entire cost of tuition, board and all for the long term of five months is one hundred and sixty two kroner, about forty-four dollars.

OF all the high schools the one at Askov is both the oldest and the most famous as interpreting the new national life of Denmark. It was started in eighteen hundred and forty-four at Roedding in Slesvig, the province which the Germans took after the disastrous war of eighteen hundred and sixty-four. It was then no longer wanted there and moved across the border, at this point a narrow river, taking its traditions and its teachers with it. A second year's course for men and women has been established since, and Askov has become a sort of extension school in the system, the alma mater of all the rest. Its students from north of the frontier number two or three hundred in winter. On fine Sundays their brethren beyond the river who cling to their fatherland with the unconquerable loyalty of their race, row across and join in singing the old songs that are forbidden where the line is picketed by German bayonets, and when they go back their hosts follow them to the shore beneath the folds of old Dannebrog, the flag of their fathers and of their love.

Probably quite ten thousand youths and maidens attended the people's high schools last year—not a very large number as we reckon things in America, but in Denmark it is more than one in three hundred of the population. Their effect upon Danish life in half a century has been extraordinary. They have borne a strong hand in the religious awakening that has adopted the name of their founder. The Grundtvigians are the Happy Christians of my friend, the butter maker. Their very opponents, the Hell Preachers, largely miscalled, being in fact the Puritans of Denmark, owe to these schools in no small measure, through the arousing of the people, the success of their propaganda. There are still those—we would call them stand-patters—who do not approve of what they are pleased to call their erratic ways. While allowing the state grants, they yearn aloud in parliament for something "less fantastic, more reasonable and every day," and happily they yearn in vain. The answer was given in debate over the grants a few years ago: "no use feeding the birds, if at the same time you tie them up with a string."

WHERE THE FARMERS ARE THE RULERS

So they go free upon their mission of teaching the lesson that just to be useful brings happiness, and through their teaching the Danish nation has become the most content in all Europe. Danish culture is a part of the very life of the people. It is not a polish, but inherent in the thought of every one who speaks the Danish tongue. Norway, Sweden and Finland have copied the people's high schools, and they have been transplanted to the British Isles and to some of our Western States where there are many immigrants from Denmark. They have thriven, but never quite as in the old land, out of the soil of which they grew in its hour of need. "They have fostered there," wrote an English critic not long ago, "love of country and a thirst for knowledge; they have given to industry a marvelous ingenuity and success and made life in many simple homes fuller of nobler interests and of higher cares."

THAT brings us back to the butter which we have still to account for; for butter to Denmark spells prosperity. Prior to eighteen hundred and eighty the Danish husbandman by haphazard farming made an indifferent quality of this staple and sold it for what he could get, which was not much. In that year he changed to coöperative methods, first in dairying, then in the making of bacon and the raising of poultry and eggs. Today Denmark ships to England much more than half a million dollars worth of butter a week at twice the old price, for it is the best butter in the world. Her slaughter houses handle twelve or thirteen hundred thousand hogs bred on home soil, and the value of the egg export is seven millions a year and over. More than that, the Danish farmer has met and beaten the trusts that would rob him of his profits in the London markets. He maintains now his own selling agencies, sends his wares across the North Sea in his own ships, and buys his supplies direct from the manufacturer at first price. He has eliminated every profit of the jobber, and the jobber himself, by the simple formula of coöperation, and has become the most prosperous agriculturist on record. He owns his own farm, borrows the money he needs on his own terms, runs his own country—about one-third of the men who sit in the Rigsdag, the Danish parliament, are farmers—and has earned the reputation of being the best farmer in the world.

The immediate cause of this extraordinary change must be sought in the epoch-making experiments and discoveries made by another farmer's son and teacher at the Agricultural Experiment Station in Copenhagen, Niels Johannes Fjord. But nothing is more certain than that the Danish farmer never could have followed him as he did if it had not been for the training of the people's high schools. It was

THE HOUSE OF GHOSTS

found in fact, that ninety percent. of the managers of the coöperative enterprises had come by this door. One of the speakers at the Agricultural Congress of eighteen hundred and ninety-seven in Stockholm put it in these words: "Just as an enrichment of the soil gives the best conditions for the seed sown in it, so a well-grounded humanistic training provides the surest basis for business capacity, and not the least so in the case of the farmer."

I sometimes wonder, when I think of it all, what the six angry parsons and the police censor would say, could they be heard on the subject now.

THE HOUSE OF GHOSTS

THE House of Ghosts was bright within, aglow and warm and gay,
A house my own once loved me in, that is not there by day:

My hound lay drowsing by the door: from sunken graves returned
My folk that I was lonely for sat where the hearth-fire burned.

There was no lightest echo lost when I undid the door:
There was no shadow where I crossed the well-remembered floor.

I bent to whisper to my hound (so long he had been dead!)
He slept no lighter nor more sound: he did not raise his head.

I brushed my father as I came; he did not move or see—
I cried upon my mother's name; she did not look at me.

Their faces in the firelight bent; they smiled in speaking slow
Of some old gracious merriment forgotten years ago.

I was so changed since they had died! How could they know or
guess
A voice that plead for love, and cried on grief and loneliness?

Fast from the House of Ghosts I fled, lest I should turn and see
The child I had been lift its head, and stare aghast at me!

MARGARET WIDDEMER.

CAPTURING WILD FLOWERS FOR THE HOME GARDEN



GARDEN is not such a formal affair as it seems to the lay mind and it need not be a great expense. Indeed, the chief joy of a garden is to make it oneself accepting a little outside help. An expert gardener is not necessary. Naturally a few loads of good soil and a handy man to do a little spading are essential when the garden is started. Later there is nothing more fascinating than to plant and to cultivate the garden oneself. When we make our own garden from the native flowers that grow in the fields, the woods and swamps, we are often amazed, enchanted to see the deliberate way in which they accommodate themselves to their changed conditions. We doubt not that they have wisdom.

A formal garden made of highly cultivated flowers has of a truth its place in certain environments; but it is not as close to nature as the more naturalistic gardens made of simple wild flowers. We must look long at the delicate beauty of these simpler plants, neither as striking nor as obvious as the more ornate garden flowers, before we learn to love them. Their beauty is purer, more exquisite, closer to the heart that beats at the center of life. A garden of wild flowers is practical if one has small grounds and a little shade to screen them from the too ardent rays of the summer sun; while for larger grounds especially if there be a bit of underbrush or wooded space, nothing is more appropriate than to plant wild flowers in clusters around trees, along fences or in the borders of walks and drives.

Such naturalistic gardening is seen at several places along the Hudson River, on Long Island and somewhat frequently in the New England states. It is being done successfully in the Zoological Park in the Bronx. Mr. Hermann W. Merkel, chief forester and constructor, has attained some remarkable results in beautifying this park. When first taken over by the city the park was almost denuded of wild plants since they had been picked and uprooted by irresponsible visitors. Now the unsightly buildings lying adjacent to the park are blocked out by a background of tall evergreens bordered in front by low shrubs of huckleberry, arrowwood and black haw which bear bright berries far into the autumn, attracting as well numerous birds since they serve as a safe nesting place for them in the spring. What can be accomplished by judicious naturalistic planting is effectively shown in Baird Court where the wild character of the park has been preserved by a profusion of native shrubs and flowers—rhododendrons and various species of iris followed later by lilies blooming far into the summer. The ornamental planting of the Zoological Park has been entirely along naturalistic lines, indigenous plants such as

WILD FLOWERS FOR THE HOME GARDEN

azaleas, rhodoras, mountain-laurels, wake-robins, violets, anemones, ferns and wood asters with other varieties being used to great advantage. In spots the results have been strikingly picturesque.

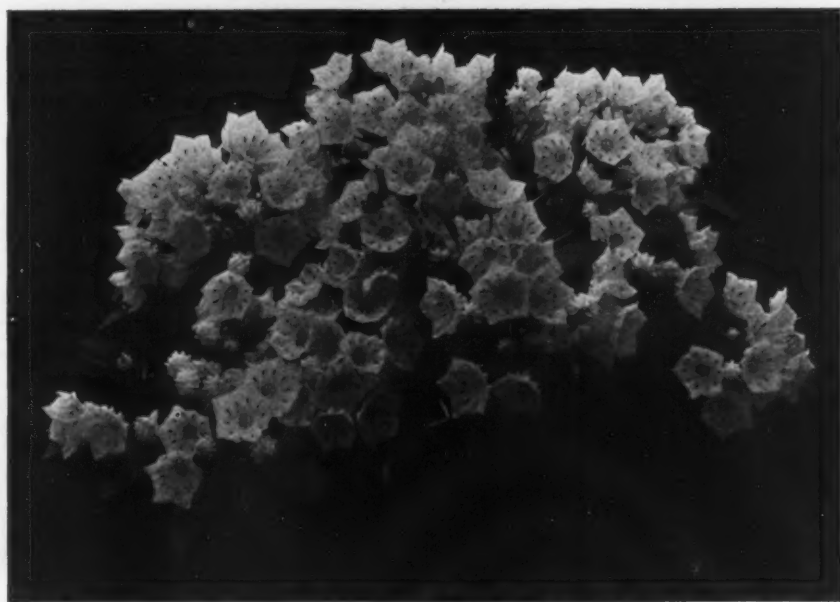
This is the end toward which we should plan—to adapt the wild flowers to our own particular garden spaces and to plant them so that they will be in harmony with the new environment. Wild flowers invariably need coaxing and careful tending for some time after transplanting; the reason being that their fibrous roots are not as well developed as plants that have benefited by frequent transplanting in the nursery. To obtain the best results for a wild-flower garden one should begin in the early spring, when the flowers are in bloom, to choose the plants for the next autumn. The following directions are given by Mr. Merkel, whose work has been eminently successful in the Zoological Park:

“**I**N transplanting and caring for wild flowers, no royal road to success exists on account of the great diversity of habits of the root system, etc., as each variety demands its special treatment. The greatest number of wild flowers belong to the class called herbaceous perennials, plants that have a deciduous top, but a persistent rootstock, which sends out a new top every spring. Among these are adder's-tongue, or dog-tooth violet, spring beauty, hepatica, spigelia, the violets, millfoil, snakeroot, the lilies, asters, columbines and others. These should all be transplanted when dormant, and it is best to mark the plants while they are in flower, as otherwise it is hard to locate them at the proper time.

“In digging, great care must be taken not to injure the rootstocks or bulbs, many of which are sunk deeply in the ground. Always be on the safe side and take too much earth or sod rather than too little, and some of the flowers, especially those that bloom very early in spring, must be transplanted in the autumn.

“The deciduous ferns, such as the royal fern, and the cinnamon fern, do not present much difficulty, if only the entire hummock of dead and live roots is chopped out and not allowed to become too dry, but the evergreen ferns must be handled with care, and it is best to cut off the old leaves and to cover the plants loosely with litter.

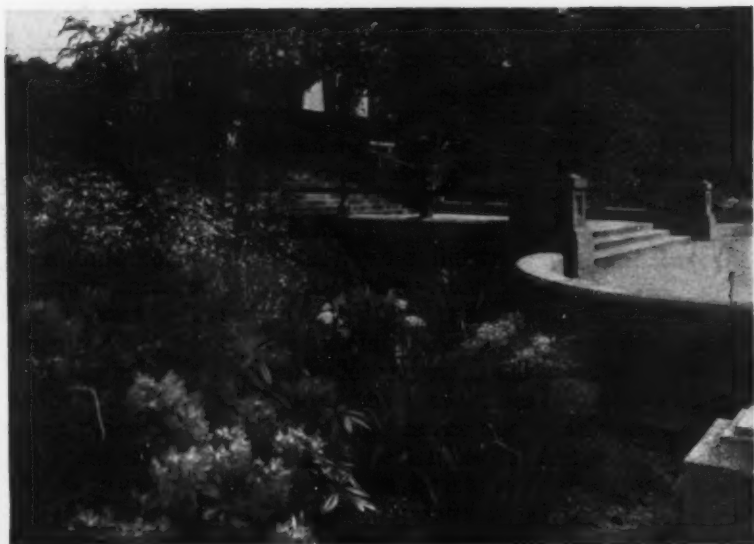
“The trailing arbutus is one of the proudest possessions of the amateur gardener, because of the difficulty of transplanting it. This is best done in very early spring, and great care must be taken to trace down its original root and leave it entirely uninjured, something which can be done only in soil that will hang together, and is free from stones. If you do happen to break the ball of earth, do not bother to take the plant home; it is sure to die.



ROSE BAY OR AMERICAN RHODODENDRON (*Rhododendron Catawbiense*): A MOUNTAIN WILD FLOWER THAT WILL FLOURISH ON A DOMESTIC HILLSIDE.
MOUNTAIN-LAUREL (*Kalmia latifolia*): POSSIBLE TO DOMESTICATE.



SOAPWORT: A WILD FLOWER THAT WILL
GROW IN A WOODSY CORNER OF A GARDEN.
NATIVE BLUE FLAG OF THE SWAMPS. CAN
BE TRANSPLANTED TO MOIST LOW GARDEN
SPOTS.



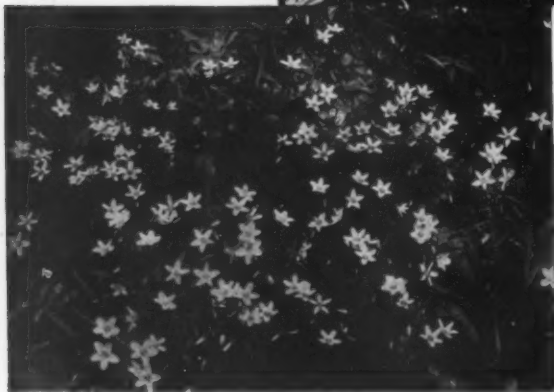
By the courtesy of the Zoological Society Bulletin.

TWO SPOTS IN THE ZOOLOGICAL GARDENS OF NEW YORK
WHERE WILD FLOWERS NATIVE TO GERMANY AND
AMERICA HAVE BEEN SUCCESSFULLY DOMESTICATED.



WILD OR ROCK PINK FORMS ONE OF THE BRIGHTEST SPOTS OF COLOR IN THE WOODS WHEN LEAVES ARE UNFOLDING AND GROWTH ALL ABOUT IS SPROUTING; IT GROWS WHERE ROCKS GROUP THEMSELVES IRREGULARLY AND WHERE THE SURROUNDING VERDURE IS DENSE: ABOUT ITS STEMS AND LEAVES THERE IS A STICKY, ROUGH FEELING,—A MEANS OF TRAPPING INSECTS THAT WOULD MAKE THEIR WAY TO THE FLOWER.

ADDER'S-TONGUE, THE EERIE LITTLE INHABITANT OF MOIST PLACES IN THE WOODS, WHICH THOREAU WISHED TO CALL FAUN LILY, ITS LEAVES BEING SHAPED LIKE THOSE OF A FAUN AND SPOTTED DELICATELY WITH BROWN: ITS PERIOD OF BLOOM IS SHORT, MERELY THAT OF THE FIRST UNCERTAIN DAYS OF SPRING. FLOWER GATHERERS SHOULD PASS IT BY, AS ONCE PICKED THE BLOOM CLOSSES INSTANTLY.



THE SPRING BEAUTY FORMS A RICH CARPET OF STAR-SHAPED BLOSSOMS VEINED WITH DELICATE LINES OF ROSE PINK. IN THE INTERIOR OF THE WOODS IT IS FOUND, SPREADS TO THE EDGES, AND STRETCHES OUT SOMETIMES UNTIL IT REACHES THE ROADSIDE BANKS. A FLOWER USELESS TO GATHER AS IT DROOPS ITS HEAD, WILTING QUICKLY.



DOGWOOD BLOSSOMS THAT BEDECK THE MAY WOODS AS IF FOR A FESTIVAL; THE PITY BEING THAT FROM OVER-PICKING IT IS SPEEDILY VANISHING.



BLOODROOT, A PRACTICAL WILD FLOWER TO BRING INTO THE GARDEN BORDER, SINCE AFTER ITS EVANESCENT FLOWERS HAVE PASSED ITS LEAVES MAKE STRONG CLUMPS OF GREEN, DOING SERVICE AS GROUND COVERS.

FOUR-LEAVED OR SILKY MILKWEED, THE FIRST OF A GREAT FAMILY TO SHOW ITSELF IN THE WOODS. SELDOM IS IT FOUND IN COLONIES OF ANY EXTENT.

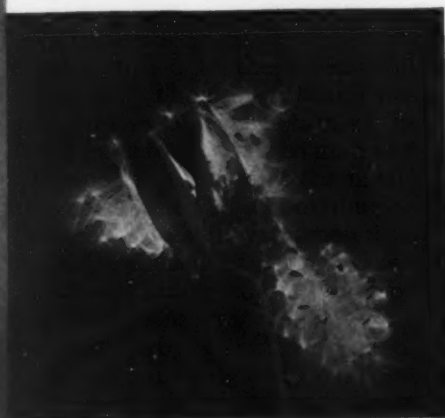


DUTCHMAN'S BREECHES, KNOWN TO EVERY CHILD WHO GATHERS HYPATICAS, VIOLETS AND ANEMONES IN THE WOODS OF EARLY SPRING.



BLAZING STAR, A STRIKINGLY BEAUTIFUL
WILD FLOWER OF SOUTHERN RANGE WHICH
GROWS OVER AND COVERS SANDY WASTES.

MILKWEED PODS LETTING FREE THEIR WINGED
SEEDS THAT THEY MAY FLY ON THE WIND
TO DISTANT PLACES.



BUTTONBALL BUSH, A FOLLOWER OF
STREAMS, A DWELLER OF LOW MOIST
MEADOWS, A COMPANION IN THE WILD OF
THE CARDINAL FLOWER.



PHLOX, THAT THROUGH HYBRIDIZATION HAS BE-
COME THE HIGH COLOR NOTE AND THE INSPIRATION
OF MANY GARDENS.

WILD FLOWERS FOR THE HOME GARDEN

"Shrubs like azaleas, rhododendrons, viburnums and cornels, are comparatively easy to collect, as any injury to the roots can always be compensated for by reducing the tops. The holly needs the greatest care of all. Not only must the roots remain intact, and be kept moist, but it is in addition necessary to snip off all of the leaves before transplanting. Yet that it can be transplanted successfully by the amateur, is proven by a beautiful holly hedge in the Vermont garden of a well-known New York architect.

"Another plant that has long eluded the gardener is the fringed gentian, the most beautiful blue wild flower we have. This plant has lately been discovered to be a biennial, that is a plant that flowers the second year of its life, then dies.

"To transplant a plant that has flowered is useless. The fringed gentian should be raised from seed, or only young plants collected that will bloom the following year."

Most of the mentioned plants can now be had in our great nurseries. In fact in Massachusetts there is a nursery that specializes entirely in wild flowers.

To place advantageously the plants chosen for a wild garden one should plan beforehand where each one is to be set. To do this one should have some knowledge of their habits; the kind of soil; the amount of shade and moisture each one likes best. Attaining this knowledge is where the pleasure of experimenting with wild flowers is to be found.

John Fiske truly says: "I often think when working over my plants of what Linnaeus once said of the unfolding of a blossom: 'I saw God in His glory passing near me, and bowed my head in worship.'" The scientific aspect of the same thought has been put into words by Tennyson:—

"Flower in the crannied wall,
I pluck you out of the crannies,
I hold you here root and all in my hand
Little flower,—but if I could understand
What you are root and all and all in all
I should know what God and man is."

No deeper thought was ever uttered by poet. For in this world of plants which, with its magician chlorophyll conjuring with sunbeams, is ceaselessly at work bringing life out of death,—in this quiet, vegetable world we may find the elementary principles of cell life in almost visible operation. So clean and forceful in action are these cells of a strong plant, so persistent their determination to work steadily for its benefit that they present in truth one of the object lessons of the plant world.

WILD FLOWERS FOR THE HOME GARDEN

ONE of the most effective American varieties suitable for gardens is the mountain-laurel, sometimes called calico-bush. It is in its glory on the mountains or hillsides from New Brunswick and Ontario southward to the Gulf of Mexico and westward to Ohio. It flowers in May and June; is easily transplanted; although unless placed to its liking, it will cease to exist after the first summer of bloom. It is necessary to prepare only a bed of leaf mould; take up a young plant without injuring the roots; prune back the bush a little, and unless something unfortunate occurs it may be expected to show its quaint flowers the second year. This lovely plant is especially prized in Europe, where it was imported in the eighteenth century. It flourishes there in the gardens of many beautiful estates.

The rhododendron in June and July blazes in a riot of bloom throughout the Alleghanies to Georgia and is well worth traveling hundreds of miles to see as it transforms the mountainsides into huge bouquets. The Japanese show a much keener appreciation of natural beauty than we, for they have a festival in the spring when the cherry trees are in blossom and often go long distances to enjoy their loveliness. The native rhododendrons serve the European cultivators as stock for producing the hybrids now used profusely. Who having seen the glory of the hybrid rhododendrons in the Villa Carlotta on the Italian Lakes can ever forget it? Although our natural varieties are not as brilliant, yet their beauty in shady gardens or on hillsides is wonderfully effective. They have the merit of being easily cultivated, in places of moist, soft climate.

The native iris, among which are found the larger blue flag, first cousin to the famous fleur-de-lis of France, are of peculiar interest as a connecting link between the old and new. Ruskin says the fleur-de-lis, which is the flower of chivalry, "has a sword for its leaf and a lily for its heart." It was adopted by the Crusader Louis VII for his emblem and remained the royal insignia of France until Napoleon replaced it with the imperial bee—symbol of industry and perseverance. The connection is close and scientific for the royal blue flower is dependent upon the industrious bee for the continuance of its existence. The iris is found mostly along the seaboard from Newfoundland to Florida, where it grows in marshes holding plenty of moisture. It is one of the most successfully grown wild flowers. To plant it near a pond, a little stream, even by a fountain, would be a step toward its preservation.

Lilies can be chosen to follow the iris, for they flower later in June, July and August, and among them are several varieties that require the same moist ground or swamps. The tall Turk's cap or Turban lily and the Canadian lily are of respectively brilliant yellow

WILD FLOWERS FOR THE HOME GARDEN

and red spotted with black. They, however, must be placed in rich, loamy soil where shade is abundant, their true home being the woods. They grow from Maine to Carolina and westward to Tennessee. The dainty little yellow adder's-tongue popularly called dog's-tooth violet is also a lily. It flowers very early in March and often grows beside a brook. It appears in the woods before the trees are in leaf and competes with the spring beauty and rue-anemone for the favors of the few insects then flying about.

Lily bulbs can be taken up when their stalks have finished blooming, and kept in a dry place until the time for planting them in the autumn.

The glorious field poppies, including the California yellow poppy, are not native to America as they are to Europe. They are so nearly wild however that they are appropriate in a naturalistic garden. They can best be grown from seeds and appear well in beds or borders.

OF the host of lovely wild flowers, native shrubs and plants only a few well suited to garden cultivation can be mentioned.

Besides the plants already named as adaptable to American gardens, more particularly in the Atlantic States, are the arrowwood, black haw, highbush huckleberry, beautiful in color in the autumn, viburnum, azaleas, rhodora, swamp pink, snake-root, bugbane, wake-robin, Carolina lily, Solomon's seal, golden-rod, asters, black-eyed Susan, violet and hepatica. The various forms of wild, terrestrial orchids, including the pink lady's slipper or moccasin flower, are particularly beautiful in a wild garden.

In the more conspicuous wild-flower gardens of the northeastern States an effort has been made to gain not only beauty and effect by their use, but also to preserve those that are vanishing under the tread of man and the transformation of woods and meadows into suburban towns. The wild flowers are sensitive as well as shy, and all places near to busy centers are now facing the same danger that has overtaken England, a country in which the native flowers are to be seen only at Kew or preserved on private estates.

Each year in this country the wild flowers seek haunts farther away from cities and towns and become more difficult to find in their chosen habitat. Mrs. O. H. P. Belmont, at her country home in Hempstead, Long Island, has made most attractive additions to her garden by the use of many wildlings. Probably Mrs. Belmont has pursued her way in opposition to the advice of skilled gardeners, men who believe in grafting and hybridization and who delight, through their ability to multiply petals and enlarge blooms, in obliterating much native simplicity. Mrs. Belmont has made extensive use of

WILD FLOWERS FOR THE HOME GARDEN

the cardinal flower. Indeed, it produces a bloom that has captured even professional gardeners, who now acknowledge its desirability for low, moist spots naturalistic in treatment. Its vivid color, not unlike that of a cardinal's cloak, the piquancy of its expression and its staunch uprightness make it a striking figure anywhere. Moreover, it blooms in midsummer when brilliancy in a garden is prone to wane. Mrs. Belmont was also one of the first to become alive to the necessity of protecting the black alder, *Ilex verticillata*. Not long ago this member of the holly family could be found in plenty throughout the lowlands not far distant from city pavements. The brightness of its innumerable red berries at a time when flowers were dead and the gray and brown tones of winter prevailed, caught the eye of flower gatherers who ruthlessly stripped the shrubs of their long gay twigs, holding in truth the seeds of reproduction. Today New York is under the stigma of having practically exterminated this shrub. On Mrs. Belmont's estate it is mercifully preserved in abundance, forming one of the brilliant charms of her planting when snow lies heavy on the ground.

The late Mr. Whitelaw Reid pursued wild-flower planting on his estate in White Plains, New York. He desired the preservation of wild flowers and sought for this end on his highly cultivated acres in a way that gave him much gratification and artistic delight. Among the plants of his locality that he especially encouraged were trilliums, chaste, beautiful flowers of the wild, with an air of breeding and hyper-delicacy usually associated with the hothouse.

The planting done at Biltmore House, the home of Mr. George Vanderbilt in South Carolina, is notable for a broad and complete treatment of wild flowers. Naturally the climate in which Biltmore House is situated is highly encouraging to plant growth, touching it with a luxury and radiance that is undeniable. Mr. Vanderbilt, in the early days of planting his estate, remembered to have seen in northeastern gardens some remarkable specimens of *Azalea mollis*, a flame-colored variety.

"It is a Japanese," he was told. Mr. Vanderbilt then directed that his gardener should send to Japan to secure for him similar exquisite treasures, giving light and color to the early spring. Innumerable specimens of *Azalea mollis* were planted about his grounds and the time of their first bloom was awaited with impatience. But before they unfolded their buds the mountainsides that give a background to Biltmore House had burst into a wild medley of color among which was that of the flame azalea.

The American variety is called *Azalea lutea* and is almost identical with the *Azalea mollis* of Japan, now one of the most generally used

WILD FLOWERS FOR THE HOME GARDEN

shrubs in America. Japan indeed has supplied America with a shrub that is to be found in equal beauty and strength on her Southern mountainsides.

When exploring for unusual plants, Bartram, one of the early botanists to know the indigenous plants of America, wrote after his first encounter with the flame azalea, *Azalea lutea*:

"The epithet *Fiery* I annex to this most celebrated species of azalea as being expressive of the appearance of its flowers which are in general of the color of the finest red lead, orange and bright gold, as well as yellow and cream color. These various splendid colors are not only on separate plants, but frequently all the varieties and shades are seen in separate branches on the same plant, and the clusters of blossoms cover the shrubs in such incredible profusion on the hillsides that suddenly opening to view from dark shades we are alarmed with the apprehension of the woods being set on fire."

Examples are no longer few in this country of satisfactory work done in connection with transplanting wild flowers,—a work touching closely the land of pleasure.

With the advent of spring, the return of the birds and the bees, the desire is again felt to go forth into the wild and to bring home from its shelter the plants that give it life and beauty. In so doing a garden is built of material free to all; moreover, a step is taken toward preventing the vanishing of the wild flowers.

Homes that are simple, near to the heart of nature, are held still more closely by the presence of wild plants and shrubs unaffected but forceful in their growth.



DROOPING ANDROMEDA, A WILD FLOWER THAT
WILL FLOURISH IN THE HOME GARDEN.

PORTRAITURE AND ORIGINALITY: THE LITHOGRAPHS OF HENRIK LUND: BY HENRY REUTERDAHL



HERE are two ways of painting, one by inspiration with the paint running freely while the enthusiasm fills the mind and the blood surges under the emotion of creation and the brush moves practically of itself; the other way is to produce slowly with tender and never-ending devotion, peering lovingly into each part of the canvas nursing it so to speak as it grows. But this sort of canvas only becomes "finished," seldom complete as a unit.

The first sings with joy and inspiration, a sincere message and lives, while the latter kind is usually dead before it leaves the studio with the subject buried alive under care and hard work—which while a substitute for the real spark is but an example of patient industry. The first way belongs to Henrik Lund, the Norwegian, a rising figure in the world's art, vigorous, fearless, whose portraits, particularly that of Hans Jaeger shown at the recent Scandinavian exhibition, aroused the interest of free-thinking art lovers.

No matter what may be personal tone in a painter, he cannot live outside the influencing currents of his own time and as such Lund has unconsciously absorbed the tendencies of modern time which above all stand for a personal viewpoint expressed in a simple manner and with "color gladness" to translate a Scandinavian word literally. As blond as he is himself so is his color and he paints in broad touches, rapidly and tersely.

Landscape and figure painting has gone through its periods of stress, fighting its way into air and sunlight, and when the impressionists fought they struggled for new principles and not money. And today these painters as a whole are artistically more independent than the portraitists, who having to please others find difficulty to be captain of their own expressions. Of course there are some portrait painters who have managed to over-ride the made-to-order feeling and who are bent upon producing a work of art which happens to be a likeness at the same time. And modern portraiture of the greatest originality has been where the work was a labor of love, not involved in a desire to please. This may be why portraits of painters' families, friends or children have been finer and fuller of that meaty juice which stamps a real work of art. When portraiture is a life job a painter's eye sometimes dulls until he, a modern Lenbach, hand in hand with the camera, becomes a conscious performer. The mightiest do not escape. Sargent, rich and fêted, refuses the orders and the gold of the noblesse and takes to the water-color box as means of refreshment. And even

THE WORK OF HENRIK LUND



A SKETCH OF THEODORE ROOSEVELT BY HENRIK LUND IN FIFTEEN MINUTES: OWNED BY MR. HENRY REUTERDAHL.

plain-spoken Zorn, forsakes his frock-coated millionaires and retires to peasant life and freedom of mind. There stands Whistler's portrait of his mother—a great work of art as well as a likeness—shoulders high above those of his which were paid for.

A portraitist must above all artists have eyes of his own, seeing things individually, but so compellingly that others perceive and understand his expression and accept his honesty of purpose with

THE WORK OF HENRIK LUND

faith. To carry his artistic points—to “put them over,” to use a theatrical phrase, the artist must be strong and possess a spirit of independence and personal and artistic courage, this, or succumb to the dollar-mark.

Lund has this courage in his make-up; bred in the land of the

Vikings, he neither courts nor panders to his sitters—if they like his portrait well and good, if not—it’s too bad, and he goes right on. It is this healthy independence in art which is the principal asset of this lusty portrait



THE WORK OF HENRIK LUND

LITHOGRAPH OF CHRISTIAN
KROGH, THE NORWEGIAN
PAINTER, BY HENRIK LUND.



painter. He paints his portrait to please himself—his signature, not the sitter's, goes on it he argues—refreshing in its simplicity!

Even now with Cézanne scarcely in the past, the conventions and academic teachings in art, at least with us, are thought more of than personal or inspired force. The art schools teach the young to know the facts (and poorly at that) of bare forms presented in a stodgy way—but not of life, or the expressions of humanity, and never that the individualism of the student is his choicest asset. This breeds a point of view which is entirely antagonistic to the kind of art which Lund has in him. His plain, sincere statements and his terseness of drawing where unnecessary details are obliterated are as red rags to those who still hang their hats on the pegs of academic recipes.

For must not portraits be pleasantly painted against a brown or mellow background like of an old master or the figure set against a Gainsborough ground of foliage and balustrade and above all be pretty? It would break the traditions of the game if an Andrew Carnegie was painted out-of-doors, the ironmaster's right among

THE WORK OF HENRIK LUND



LITHOGRAPH OF
HUGO REISINGER,
THE PICTURE COL-
LECTOR: BY HENRIK
LUND.

Henrik Lund

the titanic elements which his ingenuity has turned into gold. This might help to lend a physiological value to such a portrait and make it a human document to future generations. Lund's portrait of Hans Jaeger, the late Norwegian poet, shows a man leaning over a fence against some trees for background—a man without any fuss in everyday clothes talking to a neighbor as if during a stroll. But the making of such a picture involves many difficulties which tradition and demand have trained the portrait painter to sidestep. It means that the picture must be painted out-

of-doors and in one or two sittings, practically an instantaneous performance.

Lund is one of those who were born "in the sun" and who has this instant, magic touch which comes with a quick eye and a speedy brush. His instantaneous expression lies in his lithographs and with a crayon on a sheet of rough paper he makes in twenty minutes a portrait the likeness of which is so compelling that it seems to bare all the characteristics of the sitter and teems with life and personality. There can be no errors possible as the lithographic crayon admits no erasure, it must come straight from the shoulder and in one sweep. Take Mr. Roosevelt's lithograph, it is so true of the man, so full of that dynamic force and irresistible frankness which breaks through even his smile. And in comparison to Lund's virile drawing even Sargent's well-known canvas of the Colonel fades into insignificance. The subtle draughtsmanship which Lund has displayed in the litho-

THE WORK OF HENRIK LUND

graph of Hugo Reisinger, that remarkable collector of modern art, can unfortunately not be transposed through printer's ink. As a characterization it is the last word in modern drawing standing alongside Zorn's incomparable etching of Renan, the greatest plate since Rembrandt. The physical likeness alone in this lithograph appears as remarkable as the simplicity of the treatment and in many ways it surpasses his own painting of Mr.

Reisinger, splendid as is its characterization and fine paint. Among the dozens of lithographs which Lund has made of the notables of his own country the one of Christian Krogh stands first. This

grand old figure was the working spirit in the Secession movement of Norwegian art, a battle-scarred berserk, now white haired, still militant. To his fine old head Lund has imparted the solidity of a Rodin marble, plus the tenacity and Viking spirit of Krogh himself.

Lund's technique is simple as a draughtsman and painter, plain in statement, virile at the same time of reserve. It is not decadent, but modern and fresh. His art is the kind which we need here, free from frippery and artifice, healthy and young, the understanding of which will help our people to realize that even a portrait must possess the personality of the painter as well as the sitter.



LITHOGRAPH BY
HENRIK LUND.

HOW GARDEN WALLS CONSERVE THE HOME FEELING: THEIR PICTURESQUE AND PRACTICAL VALUE: BY ALICE LOUNSBERRY



FEW years ago there raged in America the widespread desire to tear down all fences and boundary walls and to blend the domain of neighbor intimately with that of neighbor. Lawns were encouraged to extend without interruption until touched by the public sidewalk; the postman, tradespeople, children and dogs walked across and about them *ad libitum*.

Even the owners of large estates disclaimed the advantages of high surrounding walls and placed their houses and gardens where they could be seen and supposedly enjoyed by every passerby. The English custom of shutting in parks and castles and gardens from public view was descried in America as selfish and undemocratic.

Today when many Englishmen have torn down their walls and abolished hedges generations old in an attempt to imitate our lack of domestic reticence, a change has come over the sentiment which formerly prevailed here. It may perhaps be owing to neighbors' dogs, to their children or even to the paths worn by postmen across various lawns that a universal desire seems to prevail for the protection given by walls. And the walled garden, the walled estate, the terrace wall and the fruit wall are finding their way into plans of the American landscape gardener.

This is perhaps because walls are capable of being not only structures of great convenience, but also objects of decorative value. Still America is young in wall building, especially in those that are beautiful. Time with its softening touch must pass before even the most satisfactory of the newer walls can have the mellowness and the air of blending with the landscape that is noticeable about English walls, to say nothing of those along the Mediterranean, the land of walls—rugged and brilliantly decorated.

Walls of field stone which were the early and seemingly indigenous ones to America were made in part to assist the farmer or country landowner in clearing up his fields. Building materials at that time were costly and the landholder wisely made use of the stones lying about his acres, doing so in the same spirit that the early settlers used logs for their cabins.

The walls he made, however, many of which are still standing especially in the New England States, were usually thrown together in a more or less careless way, the stones being piled without exact fitting, without mortar or other binding material. In consequence they were likely to break away and to roll down after those scaling the wall intent on making a short cut across fields. Yet these early, low stone



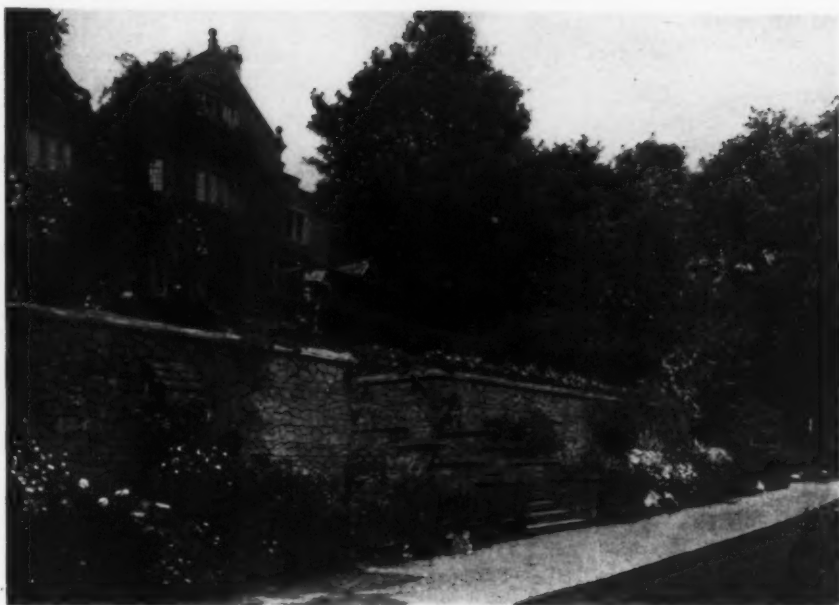
TWO VIEWS OF A FINE BRICK WALL IN KENT, ENGLAND, LEADING TO THE GARDEN WHERE MRS. BURNETT TAMED AND LOVED "THE ROBIN," OF WHICH SHE HAS RECENTLY WRITTEN.



Courtesy of Doubleday, Page & Co.

AN OLD BRICK WALL BLENDED INTO THE LANDSCAPE
BY THE PLANTING OF MANY ROSES.

STONE WALL ALONG A ROADWAY PLANTED HEAVILY
AT THE TOP WITH VINES AND SHRUBS.



Courtesy of Doubleday, Page & Co.

STEPS AND TERRACE WALL HAVING AT THE BASE A BORDER OF HARDY PERENNIALS AND AT THE TOP A LINE OF BRIGHT-COLORED PLANTING.

ROUGH STONE WALL PLANTED THICKLY WITH PERENNIALS ABLE TO THRIVE IN THE SOIL OF ITS SPACES.



THIS WALL OF ROUGH STONE SHOWS ALONG ITS FACE SEDUMS AND OTHER ROCK-LOVING PLANTS GROWING WITH EVEN MORE LUXURIANCE THAN IF THEY WERE IN A GARDEN BORDER. THE CRAMPING OF THEIR ROOTS HURTS THEM NOT AT ALL, WHILE THE WALL GIVES THEM THE WARMTH AND PROTECTION THEY SO GREATLY DESIRE.

Courtesy of Doubleday, Page & Co.

SEDUM ACRE AND THE FIG CACTUS DECORATE TO A GREAT EXTENT THIS WALL, IN ITSELF FAR FROM BEAUTIFUL. THE FIG CACTUS IS HERE A HAPPY CHOICE, SINCE IT SPREADS IRREGULARLY OVER A CONSIDERABLE SPACE, THE TONE OF ITS GREEN BEING VERY PLEASING. ITS ABILITY TO GROW IS CURBED NEITHER BY INTENSE HEAT NOR BY THE INEVITABLE DROUGHT OF SUMMER.



Courtesy of Doubleday, Page & Co.

THE PICTURESQUE, PRACTICAL GARDEN WALL

walls had a dignified appearance and when they were covered with native vines, which sought them as a support, they lent to the landscape a rude grace.

IT is probable that native stones will remain one of the materials largely used in America for walls although brick has an old and indisputable place and concrete has now as well a strong hold. In fact, the latter material seems in many places to have given a new impetus to wall building.

Brick walls have inevitable distinction and when of soft colors they make one of the most pleasing backgrounds for flowers. The accompanying photograph of a garden wall in Kent, England, shows a way in which bricks can be laid at the top of the wall so that soil placed between them, gives to plants the opportunity to extend their roots and to hold the bricks as firmly together as could be done by mortar. The reason that brick walls are not more general in this country is owing to the exceeding high cost of laying them.

Many of the newer concrete walls are clean looking and impressive, but to live up to their possibilities they should be treated with vines and blooming things. Vines have already made a good showing on many American walls, but the charm of vivifying brilliant bloom is still far from them. To see walls with flowers growing from their sides, to scent the fragrance they exhale and to have the eye fairly dazzled by their splendor, one must turn the steps to that sun-ridden strip of land bordering the Mediterranean, famous for its flower-bedecked walls as for its villas, its soft, dulcet atmosphere and its smiling, care-free people. There the walls are as characteristic as the civilization. They are moreover useful, giving to the landscape both dignity and beauty. No holder of land however limited in area is content without his surrounding wall marking off his possessions assuring him seclusion and the opportunity for peace.

The greater number of walls along this strip of country are made either of native stone or of a composition material, mellowing with the atmosphere and taking, as it grows old, soft tones of pink and buff. Usually a coping of flat stone, a railing or architectural feature in the way of a vase or ornament marks the tops of these walls; again their upper line is broken only by flowers clambering over them from the top downward or stretching upward from the base. Sometimes they are so covered with bloom, as in the rose wall at La Mortola, Italy, that the material of which they are built is lost to sight.

Although it would be futile to attempt to reproduce, especially in the northeastern States of America the same decorative brilliancy of walls that is found along this southern sea and in various other places

THE PICTURESQUE, PRACTICAL GARDEN WALL

of the Old World, on account of climatic conditions, it is something that could very readily be done in parts of the South and West and even in States having severe winter climate for at least a part of the year. Indeed a great deal of planting has to be done in order to become effective during the summer months. The use of evergreens as a substitute for the palms and cacti of semi-tropical climates would give them besides color in the winter, abetting their stalwartness.

There are several ways of planning for the floral treatment of walls. The general American habit has been to plant vines at their base and to train them upward. Along the Mediterranean the most noticeably beautiful walls show flowers and vines planted along their top and allowed to hang downward over their surface. This latter is the highly pleasing method and especially to be desired with retaining walls or those placed at the foot of terraces.

The attractiveness of floral decorations hanging over walls instead of climbing up from their base is undeniable, in fact, so enchanted with this arrangement have visitors to the Mediterranean become that they have endeavored to produce similar effects at home, even to the extent of placing along the top of their walls, boxes filled with earth in which plants might be grown. Again vines have been planted at the base on one side of a wall, trained upward and allowed to hang down on the opposite side. This treatment is advisable when a wall has been built that has no attractiveness in itself, and when it is desirable to transform it as speedily as possible into a green boundary line.

The concrete walls without niches of any sort are not possible to decorate with the many flowers that can be grown on stone walls. Their surface can best be softened by planting them at the base with vines and training the growth upward.

WALLS of rough stone can be constructed, as those herein photographed, in which intervening gaps are filled with earth so that seeds sown or plants set into it can stretch their roots until they find a firm anchorage enabling them to endure the intense suns of summer and to hold fast through the blasts of winter. In decorating a wall with blooming plants the lesson the American cares to learn is to do it abundantly. The walls of the Riviera appear as if the whole of Paris had strewn its artificial flowers over them. And the made-up flowers of Paris are world famous. They are so perfect that they appear real, and the flowers of the Mediterranean walls are so flawless that they seem to be artificial.

Roses, great, full and beautiful such as the Marechal Neil, La France and Killarney, cover these walls of the sunlit south, form-

THE PICTURESQUE, PRACTICAL GARDEN WALL

ing one of its dominant beauties. They stand as trees beside them, make festoons over them and hold as it were the wall in their embrace. The fine old brick wall shown in one of the reproduced photographs is so blended into the landscape by roses that it appears to partake of their brilliancy and charm. In the northeastern parts of the United States, rose growing on walls has barely been attempted; but of late, with the many new varieties propagated from the rugosa and wichuraiana stock, both hardy as weeds, the field has opened for such work with a promise of success. The Cherokee rose of the South has decorated many fences, clambering over them with an apparent spirit of revelry, enshrouding them, covering them with its fair white blooms. But unfortunately the range of this free-growing trailing rose is somewhat limited. It is in the province of hybridizers, however, to produce one that can take its place in the northlands.

Roses after all are the acme of desire in wall decoration. People of more simple, even more practical taste can well content themselves with using for this purpose perennials of tested value, annuals that are cheery and bright and with vines that have proved their merit.

Among perennials are found the Sedums, live-forevers, of which there are several varieties that do well in poor, shallow soil. They have a snug compact habit blooming in soft pastel colors—pink, white and yellow, and give the appearance of sitting on a wall. *Sedum acre* is one of the best, as its habit is spreading and moss-like and its yellow flowers numerous. A most beautiful addition to a wall on which a good foothold of soil can be had is the bleeding-heart, *Dicentra eximia*. It comes from the Alleghany Mountains, its leaves being as exquisite as those of any fern, its rose-colored flowers piquant in appearance and occurring all summer. It is related to the Dutchman's breeches of the woods, also a good wall plant requiring little soil, but with a season of spring bloom too short to make it of much service.

Self heal, *Prunella Webbina* with flowers crimson purple, and evergreen candytuft, *Iberis sempervirens*, showing pale white flowers in trusses are both adaptable to wall decoration. *Helianthemum perfoliatum roseum*, a comparatively new trailing plant with single flowers of salmon pink, is worthy a trial on a wall, as is also sand-wort, *Arenaria Montana*, an evergreen trailing plant, dense in its foliage and covered in spring with white flowers. The sea-pink or thrift, *Armeria maritima laucheana*, should do well in such planting, while gold dust, *Alyssum saxatile compactum*, exquisite in bloom and leaf, is attractive at the top of a wall built to form a terrace. The crab cactus has been planted and thriven on a rough stone wall on Long Island, giving to the whole planting a semi-tropical appearance. In fact many of the perennials associated with rockeries can be grown as well on walls,—

THE PICTURESQUE, PRACTICAL GARDEN WALL

that is on stone walls having niches supplied with a reasonable amount of earth. The determination of rock-loving plants is very great.

ANNUALS hold their own in decorating a wall and require a small outlay of either money or labor. Sweet alyssum known principally in America as a garden border plant does well if once well sown and established. It endures until the time of frost. Along the Mediterranean it is one of the most conspicuous bloomers on walls, occurring there as a wild flower. The pastel blue *ageratum* forms a good companion-flower, since its color is soft and the plant unmindful of intense heat and drought. Its seeds need to be sown where soil has accumulated or some plan been made for its growth.

The climbing nasturtiums are decorative in many places, their flowers being strong in color and many-toned. On the whole, however, people prefer to plant their walls with perennials which endure from year to year, rather than with annuals that have to be resown each season.

High fences almost deserving the name of walls are now designed to be covered entirely with native vines, traveler's joy, *Clematis Virginiana*, the Virginia creeper, sometimes called five-leafed ivy, bitter-sweet and others. For such a purpose a costly fence is not necessary. Posts and rails, the former being of some architectural design are serviceable, while rough stone walls are inevitably good for the purpose. The point is that the wall will be so completely covered with vines that it is likely to be very little seen. The so-called Japan ivy, *Ampelopsis Veitchii* has been used to cover many walls, being a vine of brilliant greenness in midsummer and turning to rich red and russet tones in the autumn. No vine moreover can be found better able to cling by its fine rootlets to stone and concrete surfaces. Honey-suckle, *Lonicera Japonica*, gives forth in June, a subtly sweet fragrance; *Clematis paniculata* sends out clouds of fleecy white bloom in September. The wall on which this vine grows should be unquestionably a wall. It is too heavy for a light fence.

Unless very skilfully conceived, walls are not satisfying when in themselves ornate. The materials of which they are made gives little inspiration in the way of decoration, while their primary purpose that of portraying boundaries seems to demand clear, straightforward lines. Through their quality of durability, however, they can become apparently pleasing planting grounds, accepting the softening beauty of flowers as naturally as if they were the unchanging side hills, the rocks of the woodlands or some rough-hewn bank.

THE MIGRATION OF BIRDS: BY T. GILBERT PEARSON



HERE is something weird and fascinating about the word migration. We associate it with the long ago or the far away. When we pronounce it, our minds go back to the dim stories of tribal movements carved on the rocks by men who wrought in the grim dawn of history. We wonder at the compelling force that swept the Aztecs across the vast Mexican desert, and drove our ancestors howling through the forests of northern Germany. The very sound of the word shouts to something within our blood, for even the most stolid of us must at times harken to the music of the Pied-Piper, and fain would we up and away with him to regions remote and unknown.

Man is not alone the possessor of the migrating passion. Menhaden, in vast schools, sweep madly along our Atlantic Coast in their season. From unknown regions of the ocean, herrings and salmon return to the streams of their nativity when the spirit of migration sweeps out over the shoals into the abyssal depths. There are butterflies that in companies rise from mud puddles beside the road and go dancing away to the South in autumn. The caribou, in long streams, trek southward over the barrens of Labrador when the word is passed. Even squirrels, over extended regions, have been known to migrate en masse for hundreds of miles. With birds, there is no phase of their life which is quite so distinctive. The extent and duration of their migrations are among the most wonderful phenomena of the natural world.

Ornithologists have gathered much information regarding their coming and going, but even knowledge on these points is far from complete. It is only of recent years that the nest of the solitary sandpiper has been found, a bird which passes northward in great numbers every spring. Where is the scientist who can tell us, even today, in what land the common chimney swallow passes the winter?

As to why birds migrate, we can only conjecture. Doubtless the absence of food is the controlling factor in their movements southward in autumn, but why, when a bird has passed a comfortable winter in a garden at Biloxi, should it fly northward fifteen hundred miles to build its nest on a lawn at Bar Harbor? Many theories have been advanced in explanation, but no one of them enjoys the universal acceptance of the scientific world.

To the bird student, there is keen delight in watching for the first spring arrivals and noting their departure when the year is dying. It is usually late in August that we first observe a wanton restlessness on the part of our birds which tells us that they have begun to hear

MYSTERIOUS JOURNEYS OF THE BIRDS

the call of the South. The blackbirds assemble in flocks and drift aimlessly about the fields. Every evening, for weeks to come, they will collect, a chattering multitude, in the trees of some lawn or in those skirting a village street and produce an unspeakable annoyance to their human neighbors.

Across the Hudson River from New York, back of the Palisades in the Hackensack marshes, clouds of swallows collect in the late summer evenings and for many days you may see them from the car windows as they glide through the upper air or swarm to roost among the rushes.

In a certain Southern town there is a small grove of oak trees clustered about an ancient courthouse. Here, before the first of July purple martins begin to collect of an evening. In companies of hundreds and thousands, they whirl about over the tops of the houses, alight in the trees, and then almost instantly dash upward again into the sky. Not until dark do they finally settle to roost. Until late at night a great chorus of voices may be heard among the upper branches. Their numbers increase daily for six or eight weeks, as additions, in the form of new family groups, are constantly augmenting the great gathering. Sometime along in September the migration call reaches the martins, and, yielding to its spell, they instantly depart for their winter home in Central or South America.

MANY of our smaller birds, such as warblers and vireos, do not possess the strong flocking instinct of the blackbirds and swallows but, nevertheless, may be seen associated in numbers during the season of the northern and southern movements. Small birds migrate chiefly at night and have been observed through telescopes at an estimated altitude of three miles. There are certain apparent good reasons for their going at this time. They need the daylight for gathering food, and by traveling at night they are not as subject to attack from predatory birds.

There appear to be certain, well-marked pathways in migration along which the aerial *voyageurs* wing their way. As to distribution of these avian highways, we know at least that the courses of rivers and the coastline of the continent are favored routes.

Longfellow, in the valley of the Charles, lived beneath one of these arteries of migration and, on still autumn nights, often harkened to the voices of the migrating hosts "falling dreamily through the sky," as he has told us in his "Birds of Passage."

Various species of hawks, in autumn, are to be noted in large numbers especially in certain parts of Connecticut. For days in succession they may be seen flying toward the coast. Many thousands

MYSTERIOUS JOURNEYS OF THE BIRDS

every autumn pass in the neighborhood of Bridgeport, as if impelled by a common motive. Being large, powerful flyers, it is unnecessary for them to migrate by night. They do not fly at such heights, or with such rapidity, as is usual with small birds. Among the feathered migrants, the hawks are the de luxe travelers, moving leisurely across the country, catching their prey as they need it and going comfortably to roost as usual when the sun goes down.

During the spring, it is not uncommon for strange water-fowl to be found helpless in the streets or fields of a region in which they are ordinarily unknown. These birds have become exhausted and dropped to earth during the storm of the night before, or perhaps they were injured by striking telegraph wires.

Once I picked up a loon after a stormy night. Apparently it had recovered its strength after a few hours rest, but, as the bird can only rise on the wing from a body of water, over the surface of which it can paddle or flap for many rods, and as there was no pond or lake in all the neighboring country, the loon's fate was a sad one. The situation from the first seemed desperate. After exerting every means which could be suggested, such as tossing it into the air, placing it in a large horse trough and leaving it alone for a time in an open field, I was in the end forced to realize that this was only another one of the many tragedies of migration.

Birds are often swept to sea by storm winds from off shore. Vainly they beat against the gale or flee on quivering wings before its blast, until the hungry waves swallow up their weary bodies. One morning in northern Lake Michigan, I found a Connecticut warbler lying dead on the deck beneath my window. For hours the night before a storm of wind and rain had prevailed. Overtaken many miles from shore, this little waif had been able to reach the steamer on whose sheltering deck it had fallen exhausted and died. What of its companions of the night before? Had the waves of the Lake received them? At times the loss to bird life, occasioned by storms, is appalling.

IT may thus be seen that the period of migration is fraught with numerous perils. Many birds are annually killed by striking against lighthouse towers. In September, when fogs are not uncommon, the migrants become bewildered and, seeing a light in the gloom, dash headlong toward it. Vast numbers have lost their lives by striking against the torch of the Bartholdi statute in New York Harbor. The keeper in Cape Hatteras lighthouse, some years ago, showed me a chipped place in the lens which he said had been made by the bill of a great white gannet which, one foggy night, crashed

MYSTERIOUS JOURNEYS OF THE BIRDS

through the outer protecting glass of the lighthouse lamp. Locomotive engineers have stated that in thick weather many migrating birds hurl themselves against the headlight and frequently their bodies are later picked up from the engine platform beneath.

The ponds and sloughs of all that vast country lying between the Great Lakes and the mountains of the far West constitute the principal nesting area of the North American water-fowl. This is the great nursery of the northwest from which, in autumn, come the great droves of ducks and geese that in winter darken the waters of the Southern sounds. One great stream of the migration moves down the Mississippi River to the marshes of Louisiana and the Gulf Coast of Mexico. The second wave passes diagonally across the country in a southeasterly direction until it reaches the Maryland and Virginia coastline. Thence the birds scatter southward along the bays and marshes of our Southern seaboard.

Turnstones, sanderlings, curlews and other species of the beaches and salt marshes migrate in great numbers along our Atlantic Coast. Some of them winter in the United States, but others pass onward to the West Indies and southward. The extent of the annual journeys undertaken by some of these beach birds is indeed marvelous. Commander Peary says that he found shore birds nesting on the northernmost land, where it slopes down into the Arctic Sea, less than five hundred miles from the North Pole. Prof. W. W. Cook, the ornithologist, has pointed out that in autumn the golden plovers leave North America at Nova Scotia, striking out boldly over the Atlantic Ocean, and do not again sight land until they reach the eastern coast of Brazil. Traveling, as they do, in a straight line they ordinarily pass to the eastward of the Bermuda Islands where, however, they sometimes alight when overtaken by stress of weather. Possibly some of these birds were the "land birds" which the crew of the *Santa Maria* discovered flying over the ocean when, disheartened by long watching for land, they were on the point of throwing their commander overboard. Who knows but what the discovery of America would have been long delayed had not the migrating birds indicated to the mutinous sailors that land was not far distant. Upon reaching Brazil, the golden plovers move on down to the pampas of Argentina to spend the winter. In spring they return by an entirely different route. Crossing the Gulf of Mexico, these marvelous bird travelers pass up the Mississippi Valley and on to their breeding grounds on the shores of the Arctic Ocean. The main lines of their spring and fall migration routes are separated by as much as fifteen hundred miles. During the course of the year the golden plover has taken a flight of fifteen thousand and five hundred miles.

MYSTERIOUS JOURNEYS OF THE BIRDS

The home instinct of migratory birds is exceedingly strong, for they return to the same locality year after year to rear their young. This may be usually demonstrated by watching in spring for the appearance of some characteristically marked individual noted the summer before. With undeviating flight a bird will return from its southern home, after crossing thousands of miles of ocean and land, and will again quietly settle down in your garden, often to build its nest on the very limb thus occupied the previous year.

If the birds could speak, what strange stories they might have to tell us of dangers by the way and of tropic scenes in the South. To me the bobolink has always appealed as one of the most fascinating of the migratory birds. In autumn the male loses the bright coat he has worn all summer, and the birds, assembling in flocks, pass on to Brazil to spend the winter. In the spring they return, the females and males going north in separate companies. I recall seeing these birds singing among the fields of sprouting rice on the shores of Matamuskeet Lake. Their mates had all gone north, but the riotous, rollicksome, singing males were apparently in no hurry to leave the splendid feeding grounds which they had found.

Perhaps it was folly to attempt to interpret their song, but it seems to me that they were singing:

THE JOURNEY SONG OF THE BOBOLINK.

Oh, far away is my winter home,
Where the ocelot swings 'neath the leafy dome,
Where the parrot screams by the tropic streams
That slowly glide toward the ocean foam.

I am northward bound, at my heart's behest,
Away and away on the south wind's breast
To the meadows sweet and the growing wheat,
To labor and sing and guard my nest.

But here I pause at the bounteous treat
That spreads for leagues beneath my feet,
For Love must wait, though the call be great,
While I gather the rice of Matamuskeet.

WATER GARDENS NATURAL AND ARTIFICIAL: BY GEORGE V. NASH



WE have many gardens of all kinds; gardens for roses, for lilies, for peonies, and for other flowers; so why should we not have more water gardens where we can cultivate those delightful plants which find their home in and about water? Here is a phase of gardening all but neglected in this land of ours, and yet on all sides opportunities for its display abound. Ponds, brooks, and old swamps, ideal places for this sort of gardening, are neglected, allowed to remain unkempt and unsightly, when they might be made beauty spots in the landscape. More, too, the public health would be benefited by the transformation of these old swamps into water gardens, for they are the breeding places of mosquitoes and so aid in the dissemination of malaria. As water gardens they could be stocked with fish which would destroy the larvæ of the mosquito.

Perhaps we are mostly deterred from the attempt by fear of the cost. Yet water gardens are of many kinds, and we can spend little or much on them, as we choose. A natural pond may be beautified, a brook adorned, an artificial pond produced, or if space or purse will not allow of this, we can still gratify our desire for a water garden with a small tank made of cement or the half of an old barrel or hogshead, and it is wonderful what charming effects these comparatively humble means will produce.

Let us take up first the natural pond. This will require less financial outlay in its development than other large water gardens, for here we have at hand a picture in the rough—all we need is to touch it here and there to produce a finished result. There is no expense of digging or dam-building involved, the only outlay will be for plants to spread over the water and shores, and perhaps this cost can be minimised if we conserve the supply at hand—allowing the trees and bushes already in place to suggest the treatment.

If a pond is not at our command, then we must make one. This can be accomplished by damming up a brook to form a pond, provided the topography of the land lends itself to the scheme. Or if not possible we can take an old swamp, full of tussocks and weeds, an unsightly object, and convert it into a beauty spot in the landscape. These old swamps are frequently fed by springs or small brooks, and the supply of water is usually sufficient to foster plant growth. But if neither swamp nor brook is to be had, we need not despair, for a beautiful water garden can be made on dry land with the aid of cement, there being no natural supply of water.

In the case of an old swamp some expense will be involved in the building of a dam across its lower end, this work depending entirely

WATER GARDENS IN PONDS AND STREAMS

upon the conformity of the surroundings. These old swamps are full of tussocks which must be removed. And here science has pointed out an easy way. All plants must have access to the air. The first step is to drown these plants, by depriving them of air, and this may be done by raising the water level above them. As soon as the leaves appear above the surface, have a man cut them off with a scythe. A few repetitions of this will kill the plants and the old tussocks will rot down, making a fine soil for the aquatic plants. This plan is much cheaper than the old way of digging them out with pick and mattox. The permanent depth of the pond need not be over two feet. In ponds fed by brooks or springs it is impossible, in the north, to grow the tender aquatics.

IN the selection of a site for a purely artificial pond, study the surroundings and place it in a natural position. Do not select the top of a hill, for this would at once destroy its naturalness. A hillside with a gentle slope makes a capital place, for it permits of the installation, on a lower level, of a heating plant, a necessary adjunct in the cultivation of tender aquatics. The cost of cement construction will depend entirely upon size and location. Any worker in concrete can furnish figures for this, or a home craftsman desiring the fun can do the work himself. The actual construction of the cement pond is not difficult. The lines of the rim should be artistic and fit in with the surroundings. A depth of eighteen inches or two feet is ample, if only the ordinary water lilies are to be grown. If it is desired to include the cultivation of the *Victoria regia*, then special preparation must be made in the shape of several pits six to eight feet square and a foot or eighteen inches deeper than the regular bottom of the pond. These pits should be provided with raised rims for the reception of a wooden frame and glass sash, to protect the plants during cool weather. In a pond of this kind tender aquatics may be successfully grown.

Whatever the form of pond, there are certain elements to be considered in the development of the water garden. In the first place, a good background is a great advantage, and if it is possible to locate it near a clump of trees a great deal has already been accomplished. The two essential elements which must enter into all water gardens are, the border itself, which may be called the frame of the picture; and the treatment of the water surface, the picture. The planting of the pond border should be given careful study, for upon the arrangement of this depends, in great measure, the beauty of vista and the charm of those glimpses of the garden secured as one walks along the shore. Openings must be left to allow of an

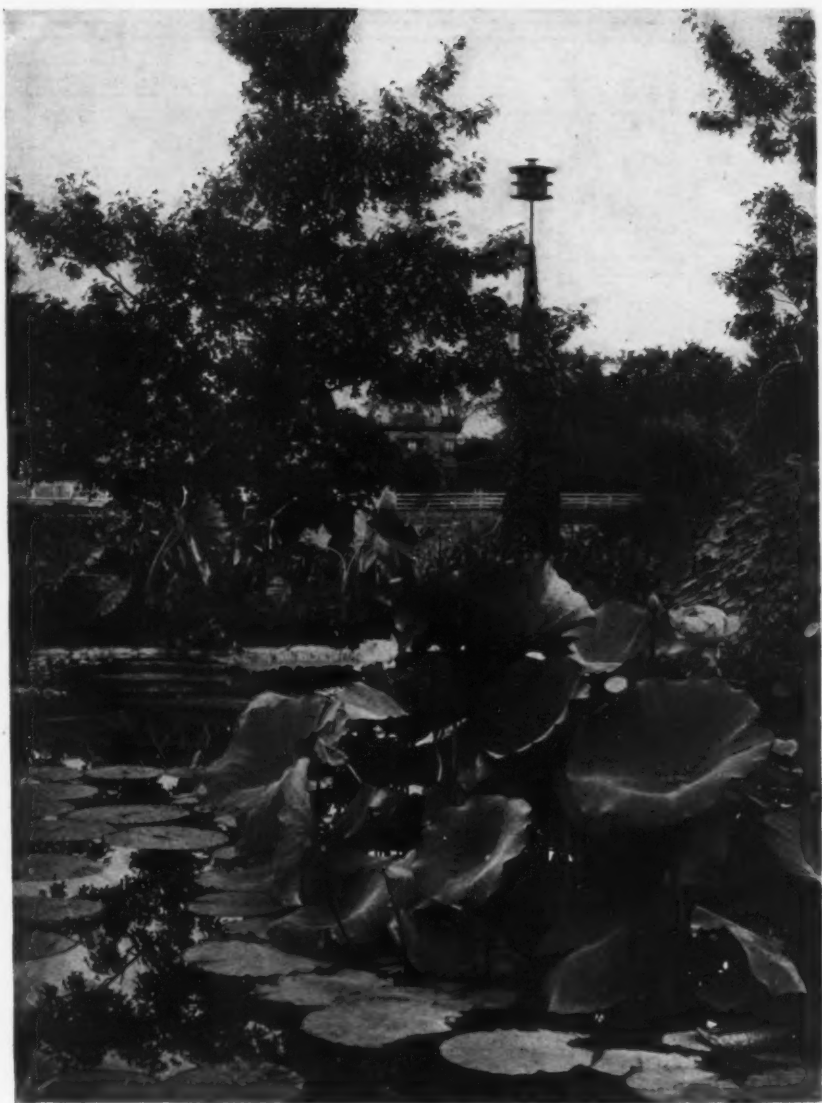
WATER GARDENS IN PONDS AND STREAMS

approach to the edge of the water so that the beauty of the aquatic plants as well as the charming vistas may be enjoyed. The skyline of the border should be undulating, and to accomplish this trees should be placed at proper places to carry up the lines, while shrubs also of varying height should be used, thus relieving the flatness which is naturally a part of a water landscape.

WITH this general discussion of the arrangement of a water garden let the next consideration be the plants which can be employed in producing the effects desired. In the first place, consult the immediate neighborhood. Probably much of the needed supply can be found in the nearby swamps and meadows. Many shrubs and trees and a wealth of herbaceous plants are native to any locality. With a judicious admixture of introduced elements they will secure a maximum of effect.

For such few trees as should be planted, any inhabitant of a swamp or low place will do. I would suggest as examples the sweet gum, *Liquidambar styraciflua*, with its autumn garb of deep crimson and yellow; the pepperidge or sour gum, *Nyssa sylvatica*; the red maple, *Acer rubrum*, aglow in the spring with its mantle of orange and red flowers, and later attractive in its abundance of red fruit, and the richness of its fall coloration being an added charm. The weeping willow, *Salix Babylonica*, is very effective placed at one end of the pond. Let it stand by itself to get the best effect, and let it be a vista point.

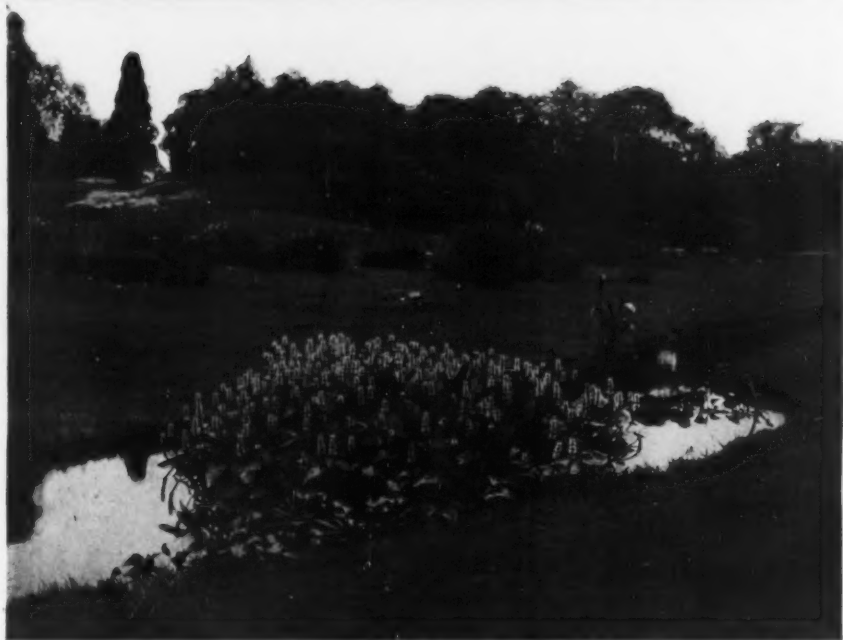
Of shrubs which will fit into the planting of the border there are many. Almost any neighborhood will show them in abundance. The willows and alders should certainly form a part of the planting, for the "pussies" of the willow always claim our attention, coming when spring first awakens; and the alders with their yellow tassels swaying and tossing in every breeze add much beauty to the barren landscape. The elder, *Sambucus Canadensis*, must not be forgotten. What more charming than a cluster of their boughs hanging gracefully over the water, at first white with bloom, later with great bunches of wine-colored fruit? The arrowwood, *Viburnum dentatum*, has its place, and the sweet pepper-bush, *Clethra alnifolia*, full of the perfume of spices, has a double attraction. The swamp honeysuckle, *Azalea viscosa*, and the dainty Carolina rose, *Rosa Carolina*, are both desirable. For winter effect moreover we have the Virginia winterberry or black alder, *Ilex verticillata*, showing bright red fruit. Everyone knows the mountain-laurel, *Kalmia latifolia*, with its profusion of flowers. Its usefulness here is quite evident. It is also an evergreen, so we also get the good of it in winter. Right here



AN ARTIFICIAL POND OF CEMENT. THE PLANT
IN THE FOREGROUND IS THE JAPANESE LOTUS,
Nelumbium nuciferum.



AN ARTIFICIAL POND OF CEMENT. THE ROYAL AMAZON WATER LILY, *Victoria regia*, IN THE FOREGROUND. A TROPICAL TOUCH IS ADDED TO THE BORDER BY THE BANANA, CASTOR-OIL PLANT, AND ELEPHANT'S EARS. A SMALL LILY POND IN THE HERBACEOUS GROUNDS, NEW YORK BOTANICAL GARDEN. THE PLANT IN THE FOREGROUND IS MARLIAC'S YELLOW WATER LILY, *Chromatella*.



A CORNER IN THE WATER GARDEN, NEW YORK BOTANICAL GARDEN. THE SHRUBS ARE ALDERS. THE WATER PLANT IN BACKGROUND IS THE YELLOW AMERICAN LOTUS, *Nelumbium luteum*.

A SMALL POND IN THE HERBACEOUS GROUNDS, NEW YORK BOTANICAL GARDEN. THE PICKEREL-WEED, *Pontederia cordata*, AS A DECORATIVE PLANT.



THE OLD SWAMP, UNCARED FOR AND UNKEMPT, FULL OF TUSSECKS AND SMALL POOLS OF STAGNANT WATER, THE BIRTHPLACE OF MOSQUITOES AND MALARIA. A DAM WAS THROWN ACROSS AT THE RIGHT, FLOODING THE SWAMP.

THE OLD SWAMP AFTER ITS TRANSFORMATION, FULL OF BEAUTY AND INTEREST. WAS IT NOT WORTH THE TROUBLE?

WATER GARDENS IN PONDS AND STREAMS

let me emphasize the desirability of putting evergreens in your border, and suggest that rhododendrons be among them. The button-bush, *Cephalanthus occidentalis*, the sweet bay, *Magnolia glauca*, and the American holly, *Ilex opaca*, can all be used. Many other shrubs are available, but this will serve to suggest what is needed.

When we come to the herbaceous plants, and it is upon them that we must rely for the great show of color in the border, there is a host from which to choose. Any neighborhood will supply a good selection. Visit the swamps and water courses in your own vicinity and see how many can be found. They are much easier to transplant than shrubs and trees, giving usually a much greater measure of success. The cattails, *Typha latifolia*, and *Typha angustifolia*, growing right in the water, are most useful. Their growth is in straight upright lines, and they are very effective when planted in the rear of water lilies. The arrow-heads, *Sagittaria*, with their halberd-shaped leaves and white flowers, are worthy a place, also the lizard's-tail, *Saururus cernuus*, with its odd spikes of creamy flowers, nodding at the apex. The pickerel-weed, *Pontederia cordata*, is an excellent plant, showing masses of blue flowers in spikes.

PLANTS which will give height to the border may be found among the grasses. The Indian rice, *Zizania aquatica*, is among them, reaching eight to ten feet in height, and showing an ample panicle of nodding flowers. Another of about the same height is the common reed, *Phragmites communis*. Still another, of somewhat taller growth, is *Arundo donax*, with broad gray-green leaves. An air of lightness may be added to the border by planting groups of the Japanese reed-grass, *Miscanthus sinensis*. It comes into flower in the fall, its feathery tassels persisting a long time. The variety known as *gracillimus* gives the best effect. Two of the common blue flags of the swamps, *Iris prismatica*, together with the Japanese iris, *Iris Kämpferi* or *laevigata*, occurring in a number of shades, will introduce much variety of color. The common marsh marigold, *Caltha palustris*, is one of the best early yellows. It snuggles close down at the edge of the pond and makes itself at home there, its beauty being reflected in the still waters. The much despised skunk cabbage, *Spathyema foetida*, is an excellent plant for foliage effect, giving a tender green early in the spring. The American hellebore, *Verbatrum viride*, is a stately plant, upright in habit, and very effective in mass, growing four to five feet tall.

Perhaps the most striking of all the native swamp plants is the rose mallow, *Hibiscus Moscheutos*, a tall, bushy plant, of vigorous habit, attractive in foliage, and sending forth during the month of

WATER GARDENS IN PONDS AND STREAMS

August a succession of lovely pink blossoms five to eight inches across. A mass of these plants against a background of dark green is one of the most striking features of a water garden. Then there is the white swamp mallow, known as "crimson eye," *Hibiscus oculi-roseus*, similar in habit to the rose mallow with pure white flowers and a deep crimson eye. The spiked loose-strife, *Lythrum salicaria*, its flowers a rich purple, and the brilliant cardinal flower, *Lobelia cardinalis*, a mass of flaming red, should occupy respectively a prominent place. They must however be widely separated since their colors glare at each other. And by the way, the harmony of color should be carefully studied in the planting scheme.

There are so many herbaceous plants which can be used that it would take pages to enumerate them all. The asters, the golden-rods, the swamp sunflowers, the tickseeds, and many others will furnish a wealth of material. Many can be secured in nearby swamps, and to those who really love flowers there is a certain zest in seeking thus for the desired material. The ferns and brakes must not be overlooked. What can take the place in the border of the royal fern, the ostrich fern, the cinnamon fern, and Clayton's fern? Nothing can replace their stately dignity. Terrestrial orchids will also add a touch of color and form not to be had from any other flower. The yellow fringed-orchis, *Habenaria ciliaris*, the small purple fringed-orchis, *Habenaria psychodes*, the grass-pink, *Limnorchis tuberosum*, and the showy lady's slipper, *Cypripedium spectabile*, the latter a beautiful blending of white and pink, are all orchids well worth while seeking and transplanting about the water garden.

If a touch of the tropical is aimed at use the castor-oil plant, *Ricinus communis*, or the Abyssinian banana, *Musa Ensete*, bearing in mind that they are not hardy and must have protection over the winter.

WE now come to that part of the water garden which is unique, and to which all that has gone before leads—the plants which live only in the water, ineffably charming and beautiful. Others that have been mentioned are possible to grow in an ordinary garden, but the water lilies occur only in the water garden. Remember the water lily of lakes and slow-moving streams, as it floats lightly on their surfaces responding to the touch of every wave and ripple. Can its delicious fragrance and purity be forgotten? It surpasses all other water lilies in its sweet perfume. While not as striking as some of its tropical cousins, there is associated with it a sentiment which will always make it our first choice. Another good white beauty is the tuberous water lily, *Nymphaea tuberosa*;

WATER GARDENS IN PONDS AND STREAMS

still another, of hybrid production, is known as *Nymphaea alba candidissima*. The latter is a vigorous grower and must be watched that it does not take general possession of things. In great contrast to these large flowers is the pygmy lily, *Nymphaea tetragona*, the smallest of its kind, with flowers barely two inches across. It should be grown in the shallower parts of the pond. The only native pink water lily of northeastern America is a variety of the common pond lily and is called the Cape Cod lily, *Nymphaea odorata rosea*.

We must turn to M. Latour-Marliac, the wizard in the production of hardy water lilies for some of our most striking flowers. Among his productions we can choose flowers from the clearest flesh color to the deepest red, a clear yellow, or a combination of red and yellow. The variety called chromatella, a fine yellow, is a wonderful lily, full of vigor, free of bloom. Another yellow, a dwarf form, is called helvola, an appealing little plant. The fault with the native pink lily is its weak habit and small flowers. One of these is called *carnea*, a flesh pink, while the other bears the name of *rosea*, a much deeper pink, and the better variety. Perhaps the most striking and unusual forms he has produced are those in which he merged the red flowers with the yellow. One, known as William Falconer, has the red parent predominating, and the result is a flower of deep claret color. James Bryden is another of the deep reds. Forms in which the yellow and red are equally merged are represented in *Seignoreti*, *aurora*, and *gloriosa*, revelations among water lilies. In them the center of the flower is a deep red, the ends of the petals yellow. They are unfortunately not of strong habit, so it is necessary to grow them in the shallower, warmer parts of the pond. They will need replacing from time to time.

There are two other hardy plants, sometimes called water lilies; the lotuses. One is known as the Japanese lotus, the other as the American lotus. The Japanese plant is much to be preferred, with its magnificent flowers of rich pink. It is one of the most striking features of the water garden.

ALL of the plants to which reference has been made are hardy, and they will live on from year to year, requiring little care. There are, however, other water lilies, well worthy of cultivation, which demand much more care. These are of tropical origin and so require to live in water of a much higher temperature, which can only be effected in an artificial pond, free from running water. The pond must be placed in a sheltered position so that the sun superheats the water during the day, or means must be provided for heating the water artificially. If practicable, this latter method

WATER GARDENS IN PONDS AND STREAMS

is much to be preferred as it gives absolute command over the water temperature. It is especially desirable early in the summer or early fall, or during any continued cool spell of weather. A few pipes and a hot-water boiler such as is used in greenhouses will be sufficient equipment. There can be cultivated the blue-lily-of-the-Nile, *Nymphaea caerulea*, the Cape-of-Good-Hope lily, *Nymphaea capensis*, another blue, and the Zanzibar lily, *Nymphaea Zanzibarensis*, of the deepest blue or purple. Two of the finest of these blue tender lilies are of hybrid production; they are known as pulcherrima and William Stone. A beautiful pink is called Mrs. C. W. Ward.

All of these lilies are day bloomers. There is another class which blooms at night. They are also tender, requiring special care. The Egyptian white lotus is one of them. Among the reds and pinks of this class we have *Sturtevantii*, *Omarana*, *Devoniensis* and George Huster.

Other non-hardy aquatics which will add variety to the planting are the water hyacinth, *Piaropus crassipes*; the water snowflake, *Limnanthemum indicum*; the water poppy, *Hydrocleys nymphoides*; the parrot's feather, *Myriophyllum preserpinaoides*.

But if you have gone as far in the cultivation of water lilies as to have an artificial pond with heating equipment, you will never be satisfied until you have added to your collection the royal water lily. For its cultivation it is wise to provide the deeper pits in your artificial pond to which reference was made in an earlier part of this article. The seeds for the royal water lily should be started in a greenhouse tank early in February, or young plants may be secured from dealers. There are two forms of this lily, *Victoria regia* and *Victoria cruziana*; the latter, commonly known as *Victoria trickeri*, is to be preferred, as it is of much easier cultivation, requiring a lower temperature. Think of plants with giant leaves, well shown in some of the accompanying illustrations, five to six feet across, with upturned margins of four to six inches or more high and flowers sometimes a foot across.

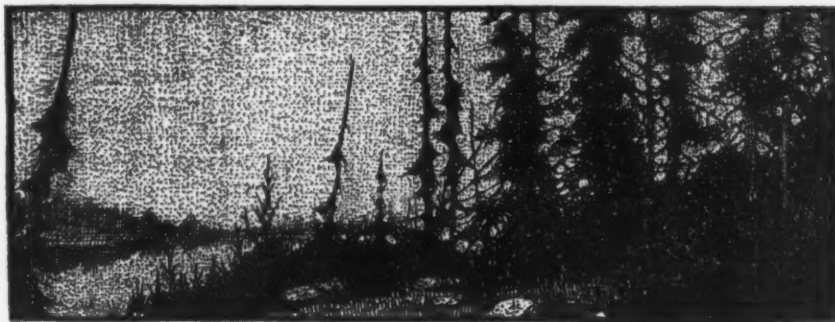
TO those who are not in a position to enter into water gardening on a large scale, let me suggest that smaller gardens, delightful in every way, are within their reach. A dam may be thrown across a small brook, thus making a little pond. It and the brook margins will give excellent opportunity for securing pretty effects. One of the accompanying illustrations shows a pond of this kind. If a brook is not available, a tank can be made of cement at small expense, and in it some of the choicest water lilies can be grown. I would place among the hardy forms which can be satis-

WATER GARDENS IN PONDS AND STREAMS

factorily grown in limited quarters the following: *Helvola*, *tetragona*, *Seignoreti*, *aurora*, *gloriosa*, *William Falconer*, *odorata rosea*, and *odorata*. Of especial value under such circumstances are the following tender lilies: *Mrs. C. W. Ward* (pink); and the following blues: *pulcherrima*, *cœrulea* and *capensis*. They, of course, must all be planted in small tubs or other receptacles. By skilful planting the artificial rim of the tank can be hidden. Irises, ferns, and other herbaceous plants should be used for this purpose.

Another form of small water garden can be made from a half hogshead, sunken into the ground, if so desired, and treated in the same way as the cement tank. Several of them may be put into a small area. Half barrels can be used for still smaller gardens. In addition to the lilies enumerated above, I would suggest as possibilities for such miniature water gardens, the following: Water poppy, water snowflake, *sagittarias*.

A number of the accompanying illustrations were made from photographs of a water garden, the result of the transformation of an old swamp. The two depicting the swamp before and after treatment are especially convincing. What has been done once, can be done again. So, in closing, let me emphasize not only the beauty of water gardens but as well their usefulness. Old swamps, the breeding places of mosquitoes, and hence the birthplace of malaria, may be transformed from these pest holes into objects of beauty—may be converted from tangles of brush and briar, and scattered pools of stagnant water, into little ponds or lakes, around the margins of which may be grown some of the most beautiful of flowers, and their waters bedecked with the fairest members of the aquatic plant world.



THE NEGRO'S CONTRIBUTION TO THE MUSIC OF AMERICA: THE LARGER OPPORTUNITY OF THE COLORED MAN OF TODAY: BY NATALIE CURTIS

NOTE: A recognition of the negro's part in the music of America finds appropriate emphasis at this time when the fiftieth anniversary of Lincoln's Emancipation Proclamation points to the progress made by the colored race industrially, economically and spiritually since the days of slavery.



OUR children dance, our people sing, even our soldiers march to "rag-time," which is fast becoming a national "Pied Piper" to whose rhythm the whole country moves. This bizarre and fascinating music with its hide-and-seek of accent has not only swept over the United States, but it has also captured Europe, where it is rightly known as "American Music," and is taken quite seriously as typical of this country. In New York, where the commercial and mechanical instinct pervades all things, popular songs are regularly manufactured on stereotyped "rag-time" pattern and turned out on Broadway till the type is becoming so conventionalized that the refrain of a "best-seller" of a few years back might aptly now be changed to "All tunes sound alike to me." Yet rag-time at its best has originality which at once attracts, and a rhythmic impulse that compels response. I remember when the great Russian conductor Safonoff heard it for the first time. The band at the hotel where he was staying had been playing serious music in his honor, when something more popular was requested by one of the other guests. With the first bars of "rag-time" the musician, who had paid scant attention before, began to listen curiously, then attentively, then enthusiastically. He rushed to the leader of the band. "But what is this? It is wonderful! So original, so interesting." The leader smilingly explained that it was the "real American music." "I shall score it for orchestra and play it in St. Petersburg!" declared the Russian, with real appreciation behind the humor of the suggestion.

Whence comes this music that now fairly runs in our veins? Though the origin of "rag-time" is a matter of discussion, no one can deny the influence of Negro musical characteristics upon our popular songs of the day. Of course the syncopation which is the predominant feature of "rag-time" is to be found occasionally in all music. It occurs in Scotch and Irish folk-song, it is very prominent in Hungarian melodies, and it is an absolutely essential element in the songs of our North American Indians of many tribes. It is frequently found in the music of primitive people who associate song with bodily movement and rely upon variety of rhythm for diversity of musical effect.

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

Any one who has studied Negro music in its different phases—dance-songs, cake-walks, laboring songs as well as the religious melodies—will certainly find ground for the assertion that what we specifically call “rag-time” (the popular American song that is played, whistled, sung and danced to in the theater, in our homes and on the street) received its first impulse from Negro songs. A remarkable volume entitled “The Autobiography of an Ex-Colored Man” contains an interesting account of the beginnings of “rag-time” by an author who evidently has intimate knowledge of the facts. He says that “rag-time” originated “in the questionable resorts about Memphis and St. Louis by Negro piano-players who knew no more of the theory of music than they did of the theory of the universe;” that this music made its way to Chicago and thence to New York, springing into immediate popularity, the crude improvisations of the Negro players and singers having been “taken down by white men, the words slightly altered and published under the names of the arrangers” (who reaped the financial profit).

IT has been said that “rag-time” first appeared in our music-halls about the time of the Chicago World's Fair and it is possible that the reiterated syncopation of the Oriental drum-beat which went echoing forth all over the country with the polyglot songs and rhythms of the “Midway Plaisance” may have had some slight share in the evolution of our popular music. But some authoritative colored men have traced the origin of the first “rag-time” melodies directly to the common working-songs and boisterous merrymaking of their own people; and in spite of white imitators and Broadway manufacturers of popular songs, no one can invent such attractive “rag-time” as that written by colored men (who are only just beginning to be adequately paid for their own ideas); also ignorant colored people sing and play this kind of music naturally and instinctively in a way peculiar to themselves, and difficult, at first, to the average American. All this would help to prove the Negro's influence, at least, on the music of this country.

Doubtless the Negroes in the South heard the tom-tom and the sharply accentuated rhythms of Indian song from the surrounding tribes with whom they mixed to some extent prior to the removal of the Southern Indians to Indian Territory. Also the slaves heard constantly the music of their masters,—the hymns and ballads of the whites. But the voice of the African sounds through these two different influences, shaping a folk-song of its own that is distinctly the product of the Negro in America. The enslaved race which is now part of our body politic, presenting one of the most difficult problems

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

of adjustment that our country has to meet, has sung itself unconsciously into the very life of our nation.

Very different indeed from modern "rag-time" both musically and spiritually are the old folk-melodies of the plantation; yet many of these have also the rhythmic feature of syncopation—the short note falling on the even beat of the musical bar. The religious slave-songs or "spirituals" have been made familiar to Northerners through the singing of the students of Hampton and Fiske Institutes, two of the great Negro schools of the South which have held meetings all through the North in the interest of their educational campaign. These and other schools have printed small collections of the plantation melodies, chiefly religious songs,—a noble work, for the slave songs are fast being lost to the memory of the present generation.

White musicians here and there have turned to these beautiful Negro folk-tunes for themes and inspiration. Though we took from the Negro greedily (and still applaud him as an "entertainer" in vaudeville and cabaret) yet few of us ever gave to the colored man any serious consideration of his talent or stopped to think that the music which white composers found worthy to be valued as a contribution to a future national "school" and whose themes they purposed to "develop" might be "developed" by Negro musicians if encouraged to study. Though the Negroes had already made some organized effort at self-education musically (as in a conservatory of music founded about nine years ago in Washington by a colored woman, Mrs. Gibbs Marshall), it is only two years ago that a group of earnest people in New York, interested in the uplift of the Negro and also in music, conceived the idea of establishing a Music School Settlement for Colored People. This institution had the two-fold aim of preserving and developing the beautiful old Negro music in its purity, and of founding a social center in the heart of the colored district where the educational appeal through music would take the children from the streets in the daytime and provide wholesome and instructive recreation for adults in the evening. The purpose of the school was chiefly sociological, but music was the avenue through which it was believed that the colored people could best be reached.

AS might have been foreseen, the enormous Negro population in New York at once endorsed this effort, the churches and the people at large contributing to the embryo school and quickly enrolling both children and grown people as pupils. The school has been in actual existence little over a year, yet already it has a building of its own at Two Hundred and Fifty-Seven West One Hundred and Thirty-fourth Street in the "Black Belt" of Harlem, with an orchestra

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

and chorus, and classes in nearly all important branches of music. Of course no one entertains the mad dream of turning all the pupils of the school into professional musicians, for it is only the exceptional few in any race who are sufficiently gifted to warrant devoting themselves exclusively to art; and pity it would be indeed, to divert Negroes, of all people, from more practical work at the present stage of their economic development. Yet music, as a factor in the life of communities and in the home, is an undoubted influence for education, refinement and uplift, and to the Negroes, who are a distinctly gregarious people, it is, as it always has been, a natural and wholesome element of social intercourse. But there are already Negroes in New York who actually do sing and play for a living, and it is precisely these that the school may help to lift out of the demoralizing environment of all-night restaurants and cheap theatrical shows into a world of better effort.

Though the actual work done by the young institution is productive of much good, it is the influence of the school which is most potent both as a settlement, and also in creating a better understanding between whites and blacks. As a rule, it used to make no difference how gifted a colored man might be, or how well he might play an instrument; the Negro could hardly hope to be taken seriously and to find a place among white musicians: vaudeville and "entertaining" were the only fields in music easily open to him. A very few men in different parts of the country have forged their way to the front, with a heroism worthy of all admiration. But most Negro musicians have been obliged to stay with the clog-dance and the comic-song; the color-line was a barrier in music as in the trades and professions.

But, through the efforts of the School, New York was given a real awakening last May, when the city learned to see what the Negroes had themselves accomplished in music utterly without the aid, instruction, or even the knowledge of white citizens. Few white people had ever heard of the orchestra of the "Clef Club," a band of a hundred and twenty-five members organized a few years ago by the colored people themselves at whose head now stands James Reese Europe, a man with a strong sense of organization and discipline and with pronounced musical ability. For the benefit of the Settlement School this orchestra and several other colored musicians volunteered their services at a great concert of Negro music given on May second in Carnegie Hall. I mention the date because this concert really formed an epoch in the musical life of the Negro and also in the development of Negro music. Hardly a day passes that the influence of that concert is not felt in some phase of Negro life in this city, for

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

our eyes were then opened as never before, not only to the Negroes' ability, but to the importance of the step that the School had taken in appealing to the higher nature of the colored people through their own talent and in helping them to turn that talent to the good of our whole country. For music is certainly one of the distinct contributions that the Negro has to offer to our American life.

It was an astonishing sight, that Negro orchestra (a sort of American "Balalaika") that filled the entire stage with banjos, mandolins, guitars, a few violins, violas, celli, double basses, here and there a wind instrument, some drums, eloquent in syncopation, and the sonorous background of ten upright pianos corresponding in efficiency to the cymbalo of the Hungarian band. Europe uplifted his baton and the orchestra began (with an accuracy of "attack" that many a greater band might envy) a stirring march composed by the leader. It was the "Pied Piper" again, for as one looked through the audience, one saw heads swaying and feet tapping in time to the incisive rhythm, and when the march neared the end, and the whole band burst out singing as well as playing, the novelty of this climax—a novelty to the whites, at least—brought a very storm of tumultuous applause. After that, the audience settled back with a broad smile of enjoyment.

MOST of these Clef Club men play by ear; two-thirds of them could not read a note when they first joined the organization. They have "picked up" the ability to play an instrument, and, like the Hungarians and the gypsies, when they have caught the melody, they are quick to catch by ear their own orchestral parts also, or even to fill in and improvise the harmonies,—but always subject to the criticism and leadership of the conductor who corrects and drills his musicians carefully at rehearsals. These Negro players who sing also, think nothing of playing a bass part and singing tenor at the same time or of playing alto and singing bass! Yet these are men with only odd hours for practise,—many of them being waiters, porters, elevator-boys, barbers, employees or tradesmen of different kinds. Even as the Negroes in the South sing naturally in four part harmonies at their work in field or factory, so too these Negroes in the North almost equally untrained musically, play and sing by virtue of sheer natural ability.

The program on May second was made up entirely of the modern work of Negro musicians, most of the composers taking part in the performance. There were in the audience many of New York's best white musicians and also contributors to our Philharmonic and Symphony Orchestras; and the musical editors of the New York papers

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

had come in order to give this enterprise serious consideration. Never before had the Negroes had such an opportunity.

An example of what the educated Negro can achieve is furnished by the career of Samuel Coleridge-Taylor, a British-African mulatto who lived and worked in England and whose recent death in the thirty-eighth year of his age is mourned abroad as a loss to the English musical world; for Coleridge-Taylor was not only a composer of eminence but was a professor of composition at Trinity College, and conductor of the Handel Society, a prominent English choral organization. In an obituary notice the London Telegraph describes Coleridge-Taylor as "one of the foremost of English composers of the present day . . . undoubtedly the first person of Negro birth to achieve fame as a creative musician." His greatest work, a choral trilogy called "Hiawatha" is said to have "brought a new 'note' into English music." Coleridge-Taylor studied at the Royal College of Music in Kensington, and at eighteen years won a scholarship in composition; three years later a symphony by him was produced at St. James Hall under Sir Charles Stanford's direction, and a work for clarinet and strings was performed in Berlin by the Joachim quartet.

He never visited West Africa, his father's native country, yet he had a strong belief in the musical instinct of his people, and a keen interest in Negro songs. He composed some African Dances, an African Suite for the piano and an orchestral Rhapsody on Negro themes, written for the Norfolk Festival in Connecticut in nineteen hundred and ten. But though he had talent, Coleridge-Taylor had not the background of cataclysmic human experience of the Negro in this country, an experience which has charged the folk-song of the American Negro (even as oppression, pain and struggle have colored the folk-song of the people of Russia) with a wealth of pathos, longing and aspiration. No American Negro can be placed in the same class with Coleridge-Taylor as regards scholarly musicianship, yet the Negro in this country has a message that the British-African could not give—a message that sings the struggle of a race from darkness into light.

THE present impetus toward an appreciation of our own Negro folk-music was undoubtedly given by the sojourn of Dvorak in New York, and by the emphatic words of the great Bohemian who wrote that the "so-called plantation songs are indeed the most striking and appealing melodies that have yet been heard on this side of the water."

Those who knew Dvorak in this country link the recollection of him with the thought of Henry T. Burleigh, one of our foremost

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

Negro musicians. Burleigh was educated at the National Conservatory in New York, and was still a student when Dvorak came to America to take charge of that institution. The talented young Negro greatly interested the Bohemian composer, and it was partly through contact with Burleigh that Dvorak became familiar with Negro songs, incorporating their rhythmic and melodic characteristics in compositions of his own which he hoped would point a path to the future development of a national American music. The "Symphony from the New World," and the so-called "Negro" string-quartet which were written to this end, are filled with suggestions of the composer's study and appreciation of Negro melodies and of the association of the great master with the young colored student.

A pioneer for the Negro's right to enter the field of serious art, Burleigh has worked for years in New York, never sinking his high standard, never doing anything that would compromise his dignity as a musician, never allowing himself to be beaten back by prejudice. Quietly, unassumingly but firmly he has maintained his hard-earned place among professional musicians. For many years he has been baritone at St. George's Episcopal Church on Stuyvesant Square and is now also a member of the choir at the Temple Emanu-El on Fifth Avenue.

Though Burleigh has made two small collections: "Plantation Melodies, Old and New," and "Negro Minstrel Songs," and has also written songs of his own, he is best known as a singer, and particularly as an exponent of the old slave songs. Realizing the beauty of these melodies Burleigh has always placed them on his programs, striving to make white people and black appreciate this folk-music of America; for the Negroes of today, especially those in the North, have turned from the songs that remind them of their former subjugation and of the present race ostracism, and Burleigh rightly feels that in losing the old plantation melodies the colored people are throwing away their best musical asset. It is indeed doubtful if any Negro music of the future can ever equal in simple beauty and depth of feeling that of the past.

Another important figure among our colored musicians is Will Marion Cook, chiefly known as the clever composer of light opera music and vaudeville sketches; for none of the publishers would take the better things that Cook had written. It was at the concert mentioned above, that some of Cook's manuscript compositions were first heard by white people, and then a new place was won for the composer.

In listening to these better works of Cook, one involuntarily recalls Shakespeare's words: "This above all, to thine own self be

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

true." It is truth to his race that stamps Cook as another of the pioneers in the artistic efforts of the Negro, lifting his work beyond an expression of musical talent alone, and making it prophetic of a larger development of the Negro people in music.

WHILE the song of the American Negro has been from the beginning the simple expression of a naturally musical folk, it was to the illiterate laborer of the plantation the one great outlet for his thoughts and feelings. In his music the Negro poured out his sufferings and his aspiration, his patient submission to the bondage of this world and his vivid hope for the world to come. His song was also his recreation and his joy; it lightened his toil, inspired his dances, accompanied his games, enriched the story-teller's narrative, and embodied all the sports and pastime of a childlike people. This music, so full of pathos, religious devotion and emotional power on the one hand, and on the other, so overflowing with humor and irresistible spirit, is the heritage of the Negro composer of today.

And Cook has had the imagination to see and to feel this. His music is the conscious response to that same unconscious musical impulse through which the very soul of his race found voice, and he is justly proud of the upward struggle of the freedman. Though his compositions so far, are little more than an indication of the larger work that he might do, he is already seeking to interpret the character of his people in music, and to carry the untaught musical language of the Negro into the realm of art. And everything that he writes is true in melody, rhythm and form to the racial utterance, so that his music, even in its most external aspect, is distinctive and characteristic. A love of strong, rich harmony, a keen dramatic sense, and a restraint that avoids excess are all qualities that help to round out and balance a highly-gifted nature.

The music of Cook and also some of that by J. Rosamond Johnson is indeed the Negro's own musical speech set to verses, some of which have the quaint mixture of crude poetry and humor characteristic of the tales of Uncle Remus. A "Negro Lullaby" by Johnson has caught in music the tender crooning of the colored "Mammy"; "Southland," an unpublished manuscript by the same composer, has for its opening theme that sublime old Negro chant "Go down, Moses," whose somber cry seems to have been wrung from the very soul of an oppressed people. In singing of the bondage of the children of Israel in Egypt the Negro felt his own, and the call:—

"Tell ole Pharaoh

Let my people go!"

has a pathos that voices the Negro's own hope for deliverance.

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

"Exhortation," a song by Cook for baritone solo and chorus is a complete genre picture showing a darky Deacon of the old time in the South, surrounded by his flock who make devout response to his words. The "exhortation" by the preacher was in old days a regular part of the camp-meeting service, and Cook has caught with vivid humor the improvisational eloquence of the Negro preacher whose dramatic appeal always stirred his listeners to such fervor of repentance and conversion. In the "Rain-Song," also by Cook, which is picturesquely colored by humorous childlike superstition, we hear an echo of the spirit of Negro folk-lore.

"When de frog's done changed his yaller vest,
An' in his brown suit now he is dressed,
Mo' rain, an' still mo' rain!
When you notice de air it stan's stock still,
An' de blackbird's voice it gits so awful shrill
Dat am de time fo' rain!"

And here again, the dramatic instinct which is so strong in the Negro (as in most primitive people, and in all children too, before it is crushed out by education) gives to this delightfully original choral composition a vigorous freshness which sweeps to a brilliant climax and quite carries an audience off its feet. When the Negroes sing the "Rain-Song," the few gestures of the soloists, who rise up, one by one from different parts of the orchestra and sing each a verse, give such a touch of delicious reality to the supposed contrasting signs of rain and of clear weather, that at the conclusion the listener feels quite sure with "Mr. Simmons" that "dere aint a-gwine ter be no rain today!"

"Exhortation" and the "Rain-Song" are certainly the best things that Cook has done, so far (and these lay unpublished for years), but "Swing Along," a cake-walk, though in a more obviously popular vein, is irresistible, and "Lover's Lane" has a swaying lilt, a crooning refrain and an unexpected loveliness of harmony that haunt the listener for days.

ALTHOUGH both Cook and Johnson have received good musical education (Cook studied at the Hochschule in Berlin, and had violin lessons from Joachim), they have endeavored in their better work to hold fast to the traditions of Negro music in this country influenced by the enthusiasm of Dvorak and by the example of Burleigh. Through translating into their own form of art the life of their people, these colored musicians have undoubtedly made a picturesque and truthful contribution to our musical literature.

Not only did the concert of last spring introduce our Negro composers to the music-lovers of this city, but it also proved that some of

THE NEGRO'S CONTRIBUTION TO AMERICAN MUSIC

the music was worthy of a place on the programs of white musicians. It was the Schola Cantorum of New York which took the initial step of performing in concert (with its own well-trained chorus) three dialect songs by Cook and Johnson. On the recital programs of great singers such dialect songs have already figured, but usually as arranged or composed by white people. The Schola program was devoted to works by living composers of America, and Kurt Schindler, conductor of the chorus, felt that, since these Negro compositions reached the standard of musicianship, they should certainly take their place with the works of other American composers, as they reflect a phase of life distinctly characteristic of America,—the life of the Southern plantation.

An unexpected force for better understanding between whites and blacks has been liberated in this conscious admission of the Negro into our musical life. Music has always sprung from people who labor out-of-doors,—simple people who sing as they work and pray and dance. Whether the Negroes, any of them will develop into great artists is not the present question; what we hope is that the Negro of today shall carry into his free industrial life in ennobling form the same love of song that upheld him spiritually in the days of bondage and made slavery bearable. For us, the fact is here, that the untaught Negro has already unconsciously given to this country the elements of a type of music that the people love, while the Negro with a little education now gives us the promise of a development of that type. The folk-song of the Negro has something to give to art,—something that is original and convincing because it speaks directly from the heart. Like all music born of the need of song in a people, it appeals to the listener with that elemental truth of feeling in which race has no part and humanity is one.

If anything can bring harmony from the present clashing of the two races during this difficult period of problem and adjustment, it might well be the peace-giver—music!

As this article goes to press another concert of Negro music is announced to take place in Carnegie Hall on Lincoln's Birthday, when a great chorus will sing in commemoration of the Emancipation Proclamation the beautiful old slave song whose burden runs:

“Oh freedom, oh freedom over me!
And before I'll be a slave
I'll be buried in my grave
I'll go home to my Lord
And be free.”

BERMUDA: THE LAND OF TWO SPRING-TIMES: BY HANNA RION



AFTER the dry heat of September comes a cooling of the morning and evening air and almost every day there drift across the little Islands strange trailing rains—blown curtains of mist. The browning, weed-filled, resting fields are hurriedly cleared by the heavy Bermudian hoe to the song of mating birds and while the calendar says "autumn," the sky, the rain, the air, the flowers and the birds know it to be spring. Everywhere is heard the steady click of hoe; for the clearing of fields must all be done by hand, followed by the shallow plow. The Islands now grow ruddy, as red fields are turned and made ready for the first crop of potatoes, lettuce and parsley.

Each flower garden wakes from its summer lethargy and celebrates the "spring." During the intense heat of summer the flower gardens have been forgotten; only new-comers torture their gardens and themselves during a Bermudian summer. Besides the Island dwellers do not need flowers in their private gardens during the months of June, July, August and September—hillsides and roadsides have become vast gardens of splendor—the oleanders are in bloom! To a voyager approaching the Islands on a ship, Bermuda then appears a great fragrant bouquet of blossoms and foliage flung out over a turquoise sea.

The colors of the oleanders have a wide range. I have counted seven varieties of pink and three of red on our own farm land. The pure white variety is the rarest and perhaps the most beautiful. Near the sea all fields are hedged by oleanders fifteen to twenty feet high; serving as wind-breaks to protect crops from the biting brine of blown sea-spray.

On looking down from the top of the hills the scene is breath-taking in its unbelievable beauty; a beauty that becomes poignant when the eye shifts to the summer sea framed by millions of oleander blossoms.

In Bermuda there are three great flower festivals, the oleander, the narcissus, and the Easter lily. The narcissi begin to flower in December and continue during January. Every garden is filled to overflowing with these exquisite "paper" narcissi, which have spilled over the edges of gardens blooming outside the walls and gateways, spreading to the banks of roads and neglected fence corners. This asphodel-like flower is the prelude to another spring—the springtime of January. As it grows and ripens, this January springtime, the violets awake in the wild untraveled country and freesias in pure, fragrant colonies claim the moist depressions of many fields as their sporting ground.



AN OLD BERMUDA ROAD WITH GAR-
DEN WALLS EACH SIDE, OVERHUNG
WITH BRILLIANT TROPICAL FOLIAGE.



A PRACTICAL GARDEN OF CULTIVATED BERMUDA LILIES.



FRAGRANT NICOTIANA IN ONE CORNER OF A BERMUDA GARDEN.

SHIRLEY POPPIES BROUGHT FROM A NEW YORK STATE GARDEN.

THE LAND OF TWO SPRINGTIMES

IN January the potato crop of the October "spring" is harvested and the fields made ready for the planting of the Bermuda onion. The days are again drenched in mingled sunshine and drifting rain—the atmosphere of midday is that of a greenhouse, a humid heat odorous with the lush growth of tropical haste. On the hillsides appear millions of little green lanterns tipped with red—the elfin blossoms of the life plant; the cliffs along the south shore are white with sweet alyssum, called by the Bermudians "Traveler's Joy"; under the larger growths of bush and tree on the hillsides shines the blue eye of the little Bermudiana—a tiny star-flowered plant with iris-like leaf.

The January spring is the time of the great bird carnival—every bird is in love, and shares its love with the world. The air is filled with the ecstasy of the redbird; gorgeous in scarlet, with top-knot touched with black, he selects the topmost branch of the tallest juniper from which to woo his modest wife, who, in prayer-meeting gown of brown and greenish copper hides in the branches of a nearby oleander. Demure, gray, ground doves, anomalously wearing pink silk stockings, walk about lovingly in pairs. At any breathless moment a quail may appear from some mysterious shadow of a tangle, while sometimes a little brood of fifteen or more babies follow the mother. The bluebird flashes across the sky going a-courting; the catbird and the sparrow are on every side, and the beautiful little chick-o'-the-village brags about his beauty every hour of the day.

It is the supreme season of the rose. Roses bloom throughout the year in Bermuda, but in the January spring they reach their greatest perfection. The Duchess de Brabant grows almost wild. It is called the "shell rose" and is regarded by the Bermudian as an exclusive and native rose. In this blest land there are no rose diseases and the rose seems not to have any insect enemies whatever.

In January strawberries begin to ripen both for the benefit of birds and tourists—the birds get the berries for a song, the tourists get them for two shillings a quart.

In February every field is sprinkled with the wild salmon-colored poppy. Several years ago a Frenchman sent to France for poppy seed. It was a windy day when it arrived and the Frenchman took a long walk, casually tossing a pinch of seeds to the wind now and then. This fact he relates only to poppy lovers, for if the Portuguese and Bermudian farmers knew him to be the culprit he would have to go back home to France. Since that windy day when the Frenchman took the long walk, there have been many other windy days and the poppy seeds have been aeroplaned to every corner of the Islands, so now when February comes, there is each early morning, a salmon glow over the fields of vegetables. Bermuda is the natural home of poppies;

THE LAND OF TWO SPRINGTIMES

but, as yet, in no garden but my own are the shirley poppies planted to any extent. I have them by the thousand and some windy day I, too, shall take a long walk.

When I began my garden in this alien land a feeling of homesickness made me desire to reproduce a certain garden at home. I wanted familiar flower-faces to cheer me—flowers that had helped me dream in childhood, and flowers that had later on helped to make some of these dreams come true. But after experimenting valiantly with American perennials for two seasons I began to realize that I must adapt my garden and dreams to new conditions. With the exception of shirley poppies and *Nicotiana affinis* my planting ground is now a typical Bermudian garden inclosed in a high bignonia hedge—a garden of Sago palm, guava, curacoa willow, crêpe myrtle, loquat, lemon, poinsettia, hibiscus, larkspur, periwinkle, candytuft, violets and daisies.

The chaotic conditions of the climate must be strangely puzzling to many flowers and trees. The Australian fiddlewood in the spring month of May, feeling the echo of its native autumn, proceeds with a curious and rather pathetic loyalty to paint its leaves yellow and crimson, and then to drop them one by one. In October the fiddlewood thrills with the memory of the Australian spring and bursts into fragrant blossoms and tender new leaves.

MANY plants here give themselves no vacation during all the year; the hibiscus, geraniums and periwinkles flower three hundred and sixty-five days without taking a breath. A foreigner might think that this unbroken feast of twelve months of flowers would eventually surfeit the senses. It does not, however, for there are distinct seasons for many of the flowers and one grows to know them and look forward to them with renewed joy. In midsummer the pampas grass throws up great plumes of silky white, the hill-sides shimmer with the candelabras of Spanish daggers, while great tangles of night-blooming cereus, snaking through tree boughs and over old walls, break into myriads of giant blossoms, making night too beautiful to seem true.

The summer is also the period of the flowering royal poinsettia, the most gorgeous of all trees. At Christmas each Bermuda garden has its own Christmas tree, the glowing poinsettia. Many years ago the poinsettia was brought from the Andes by Mr. Poinsett, a South Carolinian, and from his garden in Greenville it has spread far and wide—even to little Bermuda.

In January the century-plant-like aloe celebrates the spring by sending up an asparagus-shaped sprout which grows over night to gigan-

ANTIDOTES

tic proportions. In two weeks' time an aloe can overtop a tree of ten years' plodding growth. The aloe has a bell blossom which forms a large seed-pod, changing in time into a little aloe. It grows where the blossom appeared on the stalk, and continues to thrive contentedly swaying high in the air with the parent stalk, until some psychological moment when a breeze loosens its hold on the mother and it falls, its little rootlets all ready to thrust themselves into the soil.

The calla lilies bloom in profusion during the January spring and lead up through February to the great festivals of the Easter lilies. A field of Easter lilies is a field of snow. Its beauty, however, is tragically short-lived, for the farmer walks through his lily field denuding the stalks of their flowers, throwing them between the rows and shamelessly trampling them with his muddy feet.

The native takes the beauty of his land for granted, scarcely realizing the paradise of flowers in which he is living; but a foreigner to whom these little islands have now become home, finds Bermuda a fairy tale that grows each year in beauty, with the re-telling.

ANTIDOTES: MARGUERITE O. B. WILKINSON

HAVE you come close to a cynic and been in danger of shipwreck because of his doubts?

Seek you the young and struggling idealists who live around the corner.

Has a hypocrite infected your soul with nausea and weariness?

Go at once to the honest persons who live nearest you and visit with them.

Does Nero reign violently and cruelly in the world of your labor?

Go outside of that world, for once, seeking those who are of the kingdom of Christ.

Do you frequently meet the Devil at the corner of the street on which you live?

Turn into another avenue and walk fast, hoping, and also expecting that there you will meet God.

For when the body sinks into deep waters we reach out toward something that floats, something to which we may cling.

When flames take hold upon our clothing we seek water, or earth wherewith to quench them.

When we have swallowed poison we hunt for an antidote while there is yet time.

We do what we can to save the body, and we do it quickly.

When the soul is drowning, burning, poisoned, in danger of life, shall we not do what we can to save the soul?

LOUIS AKIN, PAINTER: IN MEMORY



WITH the knowledge that our native forests are all but destroyed, our animals of plains and woods almost extinct, our wild flowers receding to mountain heights and woods, with our bird world stricken, we who have known our land in any of her fresh loveliness turn with a sense of peace and security to the spots of her indestructible beauty, the gardens of the gods, stern and inviolable, her wild and empty violet prairies, her mesas crowned with adobe towers. The silver mists, the rose twilight, the solitary people of a dying race—a vision of the Southwest, her changeless beauty, her spell of mysterious splendor—how many of us have come to a knowledge and love of this land through the fine vision and glowing brush of Louis Akin?

It is with a real spirit of mourning that we speak of Mr. Akin's recent and lamented death in his Western home near the mesas, the Indians, the desolate, beautiful prairies of his paintings. The world has lost a painter of vision—a poet-painter—and *THE CRAFTSMAN* mourns a friend of years' standing.

In nineteen hundred and six our first article about Mr. Akin appeared in the magazine illustrated with pictures of himself and reproductions of his paintings of the Southwest. The last record we may ever make of his valiant achievement in this chosen field of distinctive American art is the present mention of the work in which he was engaged at the time of his death—the designs for the mural decoration of the great "Southwest Room" in the Natural History Museum of New York. That so fine a monument to a man's love of his country and of art should not have progressed to completion is the overwhelming tragedy of Louis Akin's early death. We have been told by the museum that friends who saw the designs for the mural decoration this last fall on a visit to Mr. Akin's studio at Flagstaff, pronounced them "wonderful!" Late in February or early in March there is a prospect that the designs for the walls of the "Southwest Room," sixty by ninety feet, will be exhibited in the room which they might have adorned with their final fresh beauty.

THOSE who only know Mr. Akin as a painter of the Southwest will be interested to hear that he really belongs to the Northwest. He was born in Portland, Oregon, and like many men here in America of significant achievement, began his early life in humble ways—a painter of signs. Undoubtedly he painted these signs very well indeed—today they must be very interesting to the men who own them as the work of one of the significant painters of



LOUIS AKIN, PAINTER OF THE SOUTHWEST, WHO WAS ENGAGED AT THE TIME OF HIS DEATH IN DESIGNING MURAL DECORATIONS FOR THE SOUTHWEST ROOM OF THE NATURAL HISTORY MUSEUM, NEW YORK.



Copyright, Detroit Publishing Company: From a Thistle Print.

"THE ORAIBA PLAZA," FROM
A PAINTING BY LOUIS AKIN.

LOUIS AKIN

the great Southwest of America. In New York Mr. Akin did some illustrations, not very important, for the call of his soul was for great singing spaces vibrant with color. And so he only waited for the opportunity to trek for the Southwest, very poor when he started and very joyous. How fine a spirit he took to his glorious task only those who know and love him could ever say.

The Hopi Indians became Louis Akin's lifelong friends, welcoming him and sharing with him the wealth of their art and religion. He was in fact one with them in dignity, sincerity and real love of beauty. And no man has so well presented these gentle, vanishing people, for no one has so intimately known and so profoundly loved them and their land.

After a few years among them Mr. Akin sent back to the East canvases that were gladly hung in the National Academy and at the annual exhibitions of the Pennsylvania Art Academy, also in dealers' galleries. The press as a whole commended him, the classic critic of academic conditions fretted a bit about his color, his curious atmosphere; his canyons swaying in frail-tinted mists bewildered these visionless men, and they accused Mr. Akin of being original. He was painting as if Holland and France had not been guiding us for years. He was courteously reproved; but he stayed out in the Southwest and painted more naturally, more fearlessly, more surely than ever. The critic did not quite exist to him, and the mesa top, the prayer at twilight, the prairie sleeping in a sea of gold and pink, the woman grinding corn, with yellow, red and blue in the picture, suns and moons and the wide skies of the Southwest filled his soul and his canvases. And he continued to work happily and beautifully for his own joy and for the good of his spirit and his friends, both Indian and white man.

There were many of these friends, how many we did not realize until the word of his sudden, sad death came, and then messages poured in to *THE CRAFTSMAN*, high tributes to man and artist. The fellow-workers of the Salmagundi Club held "an evening," not to eulogize him formally, but to come together once more in a friendly way to think and talk of "Louis" as they had thought and talked *with* him so often in the past. The stories of him were good to hear, of his loyalty to his friends, of his devotion to his art. With these friends we would like to offer a spiritual toast, our loving cup held high, "to a man whom men loved and an artist whom artists believed in."

CERTIFIED MILK AND CERTIFIED BOYS: BY ARTHUR D. DEAN



SEVERAL years ago the Catholic Protectory of New York City placed two of its boys on an up-State farm. The first day they arrived one of them was directed to get a whiffletree out of the wagon shed. Much to the surprise of the farmer, the boy returned with an old butter churn. Later, the other boy was caught chasing a hen in a most painstaking manner around an improvised race track. When sharply scolded, the boy said, "The hired man says that hens will lay better if they are exercised every day."

Such stories of the ignorance of the city institutional boy when placed on the farm are not uncommon. City institutions for orphans and juvenile delinquents mean well when they send their boys into the country, but it is an impossible task to take boys who come direct from tenements, street corners, nickel shows and the crowded city, and make them "country-minded" by an educational process developed between brick walls and by books alone.

These boys are city-minded, not to mention crime-minded. Their pulse keeps time with the hurdy-gurdy; their eyes snap with the "movies;" they exist by their wits and not by their hands; their hearts and heads are as far from the hills and fields as are the tenements from which they come. Their homes are places to go only when everything else is shut up. It is no wonder that they confuse whiffletrees with churns and accept foolish tales of farm hands.

The Board of Managers saw the point after the boy chased the hen for commercial purposes; so did the farmer, for he said, "I don't want any more city stuff sent me." A branch school has consequently been established in Westchester County, forty miles from New York, for the purpose of giving boys preparatory agricultural training. No longer does the city institution send boys into the open country unprepared to follow a vocation so unlike their previous experience and in such different social and industrial conditions. The trade-school work for the city-minded is to be supplemented by a country branch for those who may become country-minded through genuine experience with farm practise before being placed on the farm.

Naturally some Westchester County folk objected to the school being started in their neighborhood. They said, "Our fruit will be stolen, our fences will be broken down, we will have to lock our doors and bar our windows, for are not bad boys coming into the neighborhood?" But suddenly the bad boys became good, in fact, so good that the citizens of the village voted to change the name of the town to meet the new spirit and out of their own initiative gave the school a

CERTIFIED BOYS

tablet commemorating the Gettysburg Speech—Abraham Lincoln being the model and ideal of the school.

AND why shouldn't the boys change for the better? They were not bad boys at heart. Their chance at a square deal had been small; their parents and environment had not been picked for them. On their faces were written the results of malnutrition and canceled birthrights. At the station Brother Barnabas met them—a man whose keenness, insight and enthusiasm no one will question. His mind is resourceful, his heart is in the cause and his soul dedicated to the boys. He set them to work—"real work"—as the boys say. It is through this work that the boys become part and parcel of the new institution which they are to build up and maintain with their own labor and brains.

The town was re-named *Lincolndale*. Lincoln is written large all over the place. Therein lies the secret. Lincoln is over the station doorway and in the great reception hall of the school; *his* face is modeled over the fireplace and *his* spirit is in the eyes of every boy.

Of course the boys changed. They had caught the "Lincoln Spirit." Inquire of any one, from Brother Barnabas to the neighbors who so strenuously objected to the school; from the oldest boy to the newest recruit, for the cause which has brought forth clean-cut, bright, sturdy youth, and the reply is, "The Lincoln Spirit." I asked a boy about it who had been there but a week, and he said, "Why, sir, it simply means a kid that's on the level." Another said, "To give a square deal." A third, "To do your work and not kick." "Oh, I can't tell you, but I feel it," replied the fourth.

I sat on the rail fence with a more mature boy who had been at the school from the start, and he went into the details of this wonderful school spirit. This is the conversation as I recall it: "Well, it's this way," he said. "When we come here" (they are *sent*, but he did not think of it that way) "we aren't asked any questions about our past. We are told that it is up to us to make good. An older feller gets hold of us and tells us that Brother Barnabas don't stand for any nonsense and that the other fellers don't want us around unless we mean business." "But what is this 'business'?" I asked. With a flash of eye filled with pride and dignity, he answered, "It is being like Abraham Lincoln and being a good dairyman." Such an answer makes one think. Here was a sixteen year old boy who in eleven words had given an educational ideal—to develop a Man for the Job. To me it was clear that we must think of the man-end of education as well as the job-end, and that somehow we are to measure a man by what he does as well as by what he knows.

CERTIFIED BOYS

"O F course I can understand," I said, "why you want to be like Abraham Lincoln, for he became President of the United States, and of course all boys want to be President." Quick as a flash he replied, "But I didn't say I want to be President. I said I want to be a good dairyman. It requires brains to run that sort of a business and there is good money in it besides. Why, over there in Newburgh there is a fellow that gets twenty cents a quart for his certified milk. We are trying to get our milk up to the standard so it can be certified." And then followed my first lesson on certified milk. "You see," he said, "profitable dairying must come through larger milk production from the individual cow. The cow must be of the dairy type, healthy, well-fed and well-cared for. No boy here would think of kicking a cow for it breaks up the quality and quantity of milk. When the school dairy had hired men we used to have kicking cows, but since we boys have done the milking and taken care of them, the production of milk has increased twenty percent"; an improvement in record that any dairy would be proud of, and rarely good for a group of boys having their first business experience.

His knowledge of dairying soon convinced me that I was an amateur. In order to get out of deep water, I asked him what they did about discipline around there. "Well, you see, every boy when he comes to the school is put in what we call 'seven grade.' This means that he is better than nothing, for you know everyone is good for something, and it isn't fair to start him off with zero, but on the other hand it isn't fair to give him the highest mark until he has earned it. It is better to give him a low mark and make him work up to a high mark. After six months he can be advanced to the 'fourteen grade' if the other boys in the school say he has the beginning of the Lincoln spirit and has succeeded fairly well in reaching the goal. No boy can get his mark raised until he has been passed upon by the rest of us fellows. Each new boy has an older 'brother' to look after him who is ready to tell him when he gets off the track. The highest grade is thirty-five. Only twenty-eight and thirty-five grade boys act as big brothers."

All the boys seemed so happy and so "on the level" that I wanted to look around the corner of the wall or back of the corn stalks for the boys who are in every school, always given to breaking rules; but I did not find any. I inquired about smoking. The reply was, "We don't do it." "What! no boy out of the two hundred and fifty is tempted to sneak off and take a smoke?" "No, because it isn't on the level, and besides every 'twenty-eight' and 'thirty-five' boy would be after such a fellow and he would soon find out what would be coming to him." And would "be coming" seemed to the little lad both just and severe.

IT SEEMS AS
THOUGH EVEN
THE COWS HAVE
THE LINCOLN
SPIRIT. THERE
IS NEVER ANY
"ROUGH HOUS-
ING" AT MILK-
ING TIME:
EVERY YOUNG
DAIRYMAN IS
DRESSED IN
WHITE, HANDS
WASHED AND
THE WORK
SCIENTIFICALLY
CONDUCTED.



THE BOYS THEMSELVES EXPERIMENT WITH THE MILK IN THE LABORA-
TORY OF THE SCHOOL, AND THEY KNOW INDIVIDUALLY HOW GOOD OR
HOW BAD IT IS.



A PICTURE OF ONE OF THE CERTIFIED BOYS, SHOWING THE MANLY TYPE THE SCHOOL TRAINING PRODUCES. NOT ONLY ARE THE BOYS TRAINED TO DO THEIR WORK WELL AND TO BE INTERESTED IN IT, BUT THEY ARE TRAINED FROM A HUMANE POINT OF VIEW TO LOVE ANIMALS AND TO CARE FOR THEM AS A VERY IMPORTANT PART OF THEIR DEVELOPMENT. THEY ARE ALSO TAUGHT TO DRESS NEATLY AND TO THINK WELL OF THEIR OWN GOOD APPEARANCE, AND IN SPITE OF ALL THE HARD WORK AND EVEN ROUGH WORK AT TIMES, THEY ARE A TIDY LOOKING LOT OF BOYS. THAT THEY AVERAGE PRETTY MANLY IN APPEARANCE GOES WITHOUT SAYING.



ALL THE BOOKKEEPING DETAIL IS DONE IN THIS SCHOOL BY THE BOYS THEMSELVES, COMPLETE RECORDS BEING KEPT SO THAT THE BOYS WILL HAVE A WISE UNDERSTANDING OF THE BUSINESS AS WELL AS THE MANUAL END OF THEIR WORK.

CERTIFIED BOYS

IT was time for milking, so we went over to the model dairy barn. This barn was built under the directions of the best dairyman in New York. Every cow is thoroughly washed, then wiped with a cloth; every part of the barn is gone over with a damp cloth for dust; every young dairyman dressed in white and every hand washed and every fingernail cleaned before milking begins. No "rough-housing" on the part of the cows or the boys. Even the cows have the Lincoln spirit. One new arrival, inexperienced in milking, was holding a cow's tail from the milk pail. As I walked by, he smiled as he said, "Every little bit helps." The milk is taken to the milk room, each boy has his pail of milk recorded by the youthful clerk, on special milk sheets. "How much milk is Black Bess giving this month?" I asked. After a hasty glance at the charts, "Nine hundred and seventy-nine pounds," was the quick response. "Better or worse than last month?" I said. "Falling off, sir." "Any reasons?" "Oh, it is about time that she commenced to dry up."

When the milk is taken into the milk room it is weighed by pounds and reported to the boy acting as recording clerk. It is then carefully strained through four thicknesses of cheese cloth, and emptied into the pasteurizer. The milk is pasteurized for fifteen minutes at one hundred and sixty degrees Fahrenheit, after which it is allowed to cool to fifty degrees, then it is transferred into the large shipping cans, which have been thoroughly sterilized. The cans are placed in the ice chamber, where the milk is brought down to forty degrees and ready for shipping. The boys then put the canvas jackets on the cans which serve to keep this uniform temperature as long as possible, and take the milk to the railroad station for shipment daily.

Suppertime came. Did I see the traditional plates of heavy stone ware, the tin cups, the long tables and benches, and worst of all, the institutional odor? Not at all. Instead I saw a series of small dining rooms with a "thirty-five" boy presiding at a small table around which were gathered six boys, each boy being served with excellent food and plenty of it, in marked contrast to the usual doling out so common to institutions. On Saturday there was to be a ball game on the grounds between two rival schools. I supposed I would hear at the table nothing but baseball, but instead the conversation centered on cows, cows, cows. "How much milk did you get tonight, John, out of Bonnie Face?" "Say, Patty, how did that Guernsey Royal show up on the tubercular test?" "It's too bad that Big Harry has got to leave the herd." Surely education is serious business here.

After supper the boys separated. One group went to the laboratory for a regular lesson in milk testing. Others sought the general reading room, a few to read stories, but the majority evidently pre-

CERTIFIED BOYS

ferred to read farm journals. It was strange enough to see boys who but a few months before would have cared only for pictures of a prize fight, now studying points and score cards of thoroughbred cows. It was indeed a step forward!

The boys even use their playtime to take care of individually allotted plots of land on which they raise farm products. There is keen rivalry in this work. To one little chap I said, "Well, are you a dairyman too?" With a woebegone look he replied, "Brother Barnabas says I'm not big enough, but say, you ought to see my garden. It's a corker," and so it was. In this school, to be a dairyman seems to be equivalent to being President.

WE all went to bed early, for at four-thirty next morning work would begin. There was the cold plunge to take, the chores to do, breakfast to eat and the short assembly in the hall. Oh, such singing! The songs were not cut and dried, but stirred one to action and somehow tied up joy with daily work. The words and spirit of one song of which the chorus was, "Isn't it nice to toss the hay, toss the hay, toss the hay?" still lingers with me.

The boys spend half a day in school and half a day in manual work. Did I say manual work? That is the wrong term. It is the work which makes direct application of the book work. It is not manual work. It is applied head work. One little chap was hunting for the cabbage worm in the patch. This was his particular job for the day, but when he came across other worms or bugs, he knew their names and habits. This is nature study that is really worth while because it involves nature practise. In arithmetic there is an absence of puzzles such as, "If A is nine miles from B and A walks two and one half miles an hour toward B and B walks three miles," etc. Instead I found, "To lessen potato scab, the seed potatoes are soaked in a solution of half a pound of formaline to fifteen gallons of water. What is the percentage of formaline in the mixture?"

ONE boy was reading from a book on "Tile Drainage." His reading lacked the usual monotony of half-hearted interest and understanding. I asked him to close the book and tell me what he had read. I fully expected the repetition of the first sentence or two—a stumbling through a paragraph, and then the final gasp which goes with the majority of recitations. To my surprise he gave the gist of the chapter in his own words with a directness and emphasis that showed he knew what he was talking about. I was bold enough to say, "Do you really know anything about drainage?" "Sure I do; didn't I help lay about a mile of tiles last fall?" The Bulletins of the

CERTIFIED BOYS

United States Experiment Stations, the Bulletins of the College of Agriculture at Cornell, and a library of five hundred volumes on agricultural subjects furnish a large proportion of their reading material.

On the door of one of the schoolrooms hung a red card which I supposed said: "The attendance in this room has been perfect the past month," or "No case of tardiness here in a week." Such cards are quite common in most schools. But the card which I saw bore the words, "Twenty-one thousand eight hundred and fifty-two pounds of milk this month." This meant that these particular boys lead the other rooms in the actual milk produced from the herd over which they had special charge. At first this scheme of rivalry appeared to me to be a bit worldly, as the schoolmaster would say. Why not a card showing good deportment, or lack of tardiness, or high percentages in lessons? But on second thought it was clear that it was a perfect system of marking. The highest production of milk in a given term depends upon efficiency *all along the line*. Expressed in that one term "milk production" is all the training which every school should aim to give. In this particular instance it means knowledge of breeding, of feeding, of care, of testing, of account-keeping; it means the exercise of patience, of painstaking attention to details, of kindness, of coöperation. It means ability to work, to think, to achieve; it covers more than being good or being prompt or being able to pass examinations.

The boys are making it their business to reduce the number of bacteria per cubic centimeter to the point where the milk can be "certified" by the Board of Health of New York City. This is the problem of producing clean milk. But the boys are doing more than this. They are making clean their bodies, making pure their hearts, making free from harmful bacteria their attitude toward life. In short, they are making themselves "certified boys."



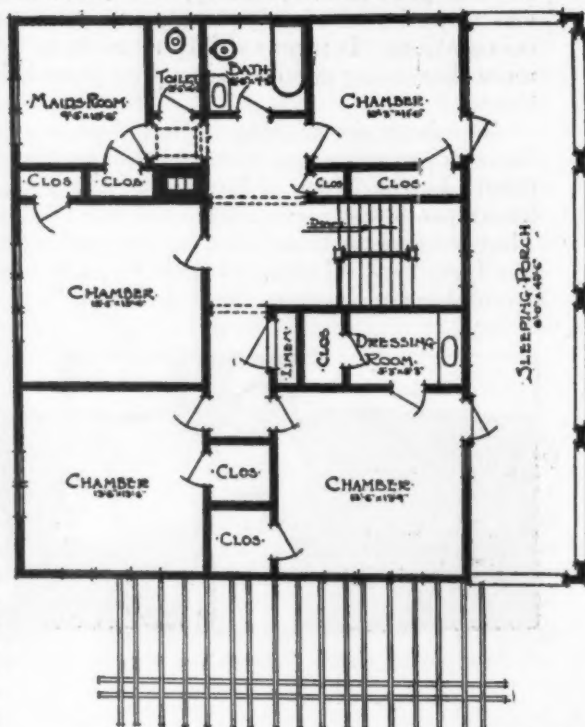


TWO SHINGLED HOUSES SPECIALLY DESIGNED FOR CRAFTSMAN CLIENTS, BUT READILY ADAPTABLE TO OTHER HOME-BUILDERS' NEEDS

DURING the past month we have been preparing in our Architectural Department, for certain clients, special plans and specifications for two new Craftsman houses. Naturally a great deal of careful thought and work has gone into the preparation of these plans, and frequent consultation with the owners, both in personal interviews and through detailed correspondence, has enabled us to carry out their wishes as fully as possible. The result, in both cases, has proved so satisfactory, both to our clients and to ourselves, that we feel sure it will be of almost equal interest to our subscribers, especially those who are contemplating the building of their own homes. And so we are presenting here exterior views, detail sketches and floor plans of both designs.

These houses, while typically Craftsman in their layout and construction, contain at the same time a number of novel and original features, the natural outcome of planning to meet definite individual and local needs. So convenient and homelike are the rooms, so practical is the construction and so satisfying are the exteriors, that we believe the plans are not only well fitted for the particular requirements for which they were originated, but are also likely to

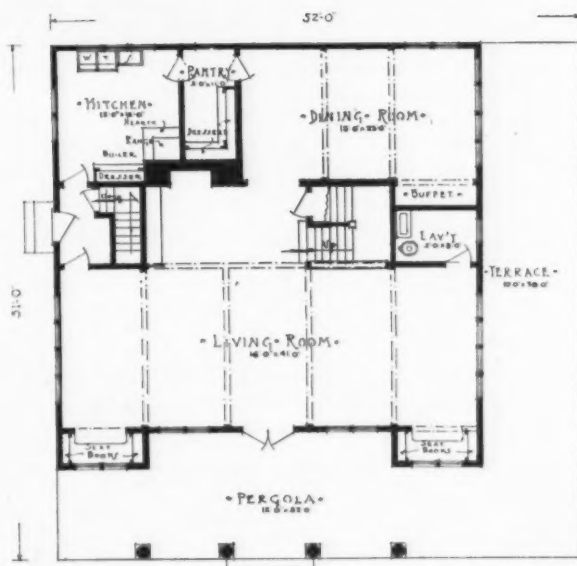
prove useful to many other home-builders in various parts of the country who are seeking something along similar lines. In a few instances, possibly, the designs shown here might prove available just as they stand; while in many cases, with a few modifications in arrangement or materials, they might be adapted to slightly different tastes and conditions. But in any case we think they will be found well worth studying, for the sake of the many new suggestions they offer in both the general planning of the interior and the handling of the various structural details.

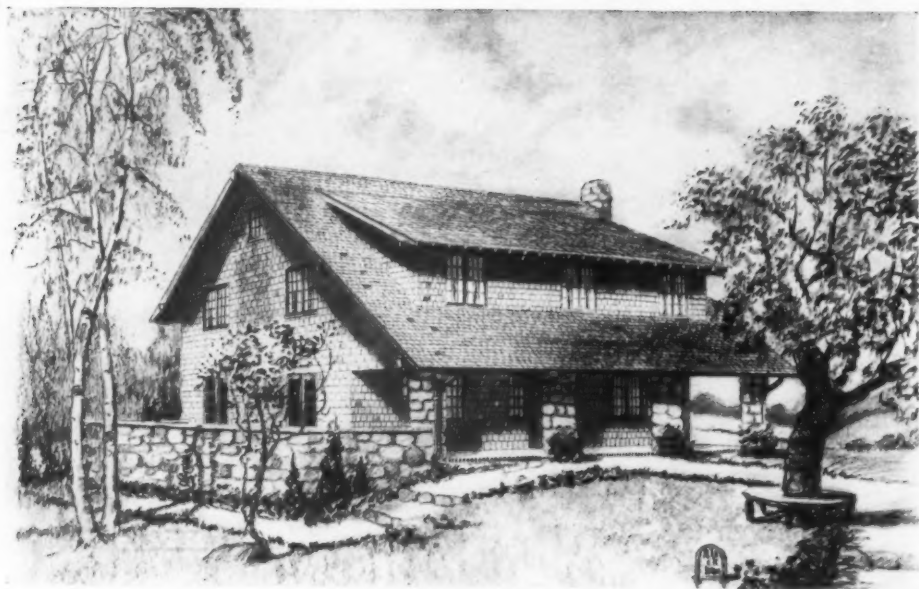


CRAFTSMAN SHINGLED HOUSE, NO. 155: SECOND FLOOR PLAN.

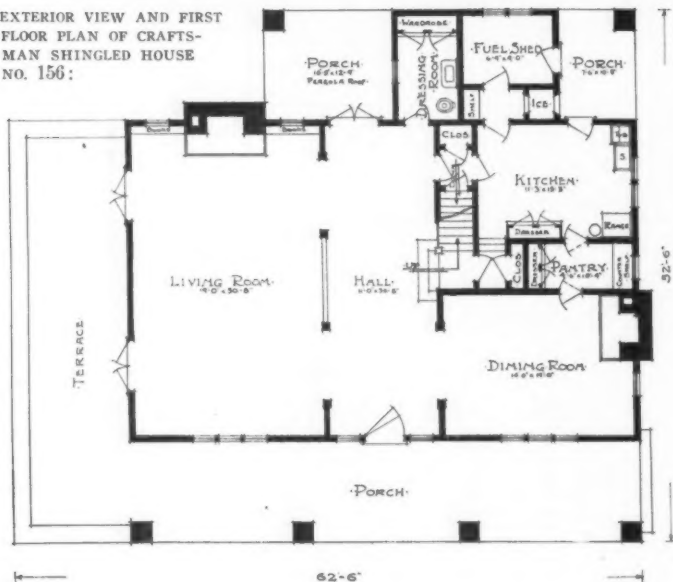


EXTERIOR VIEW AND FIRST FLOOR PLAN OF CRAFTSMAN SHINGLED HOUSE NO. 155: THIS HOUSE IS ESPECIALLY INTERESTING ON ACCOUNT OF THE STRUCTURAL FEATURES, SUCH AS THE HOODED CASEMENT WINDOWS, THE PERGOLA OVER THE ENTRANCE AND THE ONE AT THE REAR; THE FLOOR PLANS ARE WORKED OUT SO AS TO COMBINE SPACIOUSNESS WITH COMFORT AND PRIVACY: ONE OF THE MOST PRACTICAL AND ATTRACTIVE POINTS IS THE LONG SHELTERED SLEEPING BALCONY, WHICH IS ACCESSIBLE FROM TWO OF THE BED-ROOMS.





EXTERIOR VIEW AND FIRST
FLOOR PLAN OF CRAFTS-
MAN SHINGLED HOUSE
NO. 156:



THE WIDE EAVES,
LONG DORMER,
SMALL-PANED
CASEMENT WIN-
DOWS AND THE
FIELD STONE USED
IN THE PILLARS,
CHIMNEYS AND
TERRACE WALL
GIVE THE
HOUSE A VERY
HOMELIKE, PIC-
TURESQUE AIR, AND
THE ARRANGEMENT
OF THE FLOOR
PLANS IS WELL
WORTH STUDYING
FOR THE COMFORT
AND CONVENIENCE
THEY EMBODY.

CRAFTSMAN HOUSES DESIGNED FOR CLIENTS

THE first house illustrated here—No. 155—is two stories high and comprises eight good-sized main rooms as well as pantry, lavatory, separate toilet and bathroom, dressing room and large sleeping balcony. The interior is exceptionally roomy and well equipped, and the exterior both durable and attractive; yet the arrangement and construction have been worked out along such practical lines that the cost of building may be kept down to a very reasonable figure.

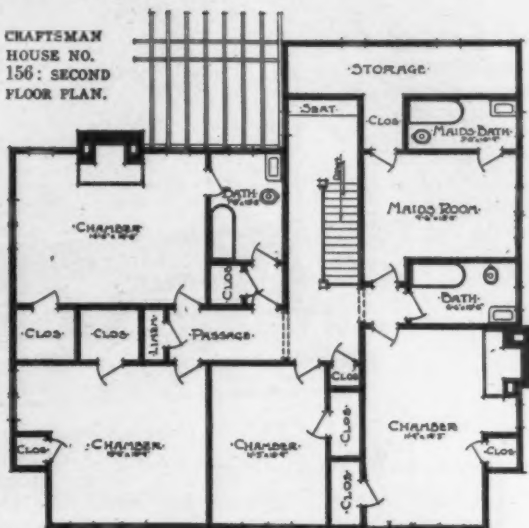
Shingles are used here for the walls, with V-jointed boards in the gables. The chimney is of brick, pergola roof of wood, while concrete is used for the pergola pillars and for the pergola and terrace floor. The design, however, could be carried out successfully in clapboards, brick, concrete or stone.

As the slope of the roof is not quite steep enough for ordinary shingles, it may be covered with a sheet roofing such as Ruberoid, or with any of the new composition shingles laid over a sheeting of tar paper or similar material.

While the house is simply and sturdily designed, a certain amount of decorative interest is afforded by the way in which the structural features are used. The solid appearance of the building is relieved by the deep-shadowed recess of the sleeping balcony, which runs across one side, sheltered by the wide overhanging eaves. The flower-boxes between the shingled posts, the projecting sill on which they rest, the heavy beam that runs across the gable and supports the purlins at each end, the shingles sprung out to form hoods above the windows of the lower story, the small-paned casement windows so carefully grouped with relation to the spaces of the walls and rooms within, and the pergola that lifts its shelter above the glass entrance in front—all these are features which, while economical and practical parts of the construction, help to give the place an inviting, homelike air.

The entrance to this house is particularly pleasing, not only on account of the pergola but because of the recess formed between the bay extensions of the living room; and the effect of cosiness may be emphasized in a practical way by the building of seats in

CRAFTSMAN
HOUSE NO.
156: SECOND
FLOOR PLAN.



the recess, as indicated on the first floor plan. The front door, it will be noticed, is protected overhead by the second story, which is not recessed like the first.

Owing to this arrangement of the entrance, no vestibule was considered necessary, and so one steps directly into the living room—a big, airy, cheerful place that extends across the entire front of the house. In addition to the group of four windows at each end and those on each side of the door, there are the bay windows in the front with their built-in seats and handy bookshelves.

So open is the layout of this first floor plan that the fireplace nook toward the rear with its broad hearth and long fireside seat is practically a part of the large living room, the only indication of a division being the ceiling beam which runs from the partition on the left to the one on the right. Four beams also run across the living room ceiling in the opposite direction, supporting the floor above, and a similar construction is shown in the dining room.

An interesting point about the living room is the placing of the staircase in one corner, partially screened from the room by a grille. The stairs go up to a half-way landing and thence turn up to the second floor hall, the space below the upper flight being utilized for a coat closet. On the right of the stairs a lavatory is provided opening out of the living room.

A wide opening at the back of the fire-

CRAFTSMAN HOUSES DESIGNED FOR CLIENTS



DETAIL OF
SLEEPING PORCH
FOR HOUSE NO.
156.

the sleeping balcony. If preferred, of course, the dressing room could be omitted and the space which it now occupies connected with the hall, so that one could reach the balcony without passing through either of the bedrooms.

This balcony will prove one of the most healthful and attractive features of the house, for it is long enough to afford room for several cots, which

place nook leads to the dining room, which has a group of four windows on the right and a pair of double windows

in the rear. This opening, by the way, if left without hangings or screen, will afford a pleasant garden vista right through the house from the front door—always a delightful feature in a

plan. As the arrangement of partitions affords a convenient recess, a built-in buffet has been provided which will add to the interest of the woodwork. A pantry is placed between the dining room and kitchen, and the latter is planned so that the range can be placed against the main chimney. The ice-box is located in a small entry, also accessible from the living room, and from this entry the cellar stairs descend.

Upstairs are four bedrooms, maid's room, bathroom and toilet, all opening from a central hall. A generous amount of closet space is provided, and in the hall are a linen closet and one for brooms. The front bedroom on the right has a dressing room attached, with a wash-basin beneath the window, and the two bedrooms on this side of the house have glass doors leading out onto

may be separated by screens if desired. The overhanging roof and high parapet will afford a certain amount of shelter, but in order to prevent rain or snow from being driven in and possibly soaking through the floor to ceilings of the rooms below, the best plan would be to provide roller shades of canvas which could be drawn down between the openings and buttoned to the sides of the shingled posts during a storm or if the family were all away at any time.

SOMEWHAT similar in materials and construction but quite different in the details of arrangement and design is the second house, No. 156, which is to be built for our client in New Hartford, Connecticut. Here again shingles are shown for the walls and cement for the floors of the porches, but in this case the porch columns and the chimneys are of field stone, and the roof, being steeper, is shingled. The rural and rather picturesque air of the building is due partly to the wide overhang of the roof above the porch, gable and dormer; the use of small-paned casement windows throughout, and the irregular appearance of the field stone, which, if used also in the terrace wall and for the risers in the cement pathway, will do much toward bringing the house into harmony with its environment.

The first floor plan of this house is quite as unique in its own way as the preceding one, and is even more open in arrangement. The door opens from the sheltered porch into a wide entrance hall which runs back to the corner pergola at the rear, and a glass door here gives one a glimpse of the back garden on entering the house. The division

CRAFTSMAN HOUSES DESIGNED FOR CLIENTS



DETAIL OF
PERGOLA
CONNECTING
HOUSE NO.
155 WITH
GARDEN.

between the hall and the rooms on either hand is suggested rather than defined, as the floor plan shows, a partition six feet high, with posts at each end, being placed between the wide openings on the left that lead into the living room.

In the front wall of this room is a group of three windows, and in the long wall on the side are two glass doors opening onto the walled terrace, while the chimneypiece at the farther end is flanked by windows overlooking the garden and pergola porch. There is plenty of wall space left for bookcases, desk and piano, as well as ample room for the grouping of seats about the open hearth.

The dining room, which is equally light and pleasant, is also provided with a fireplace built against the outside wall—and in this connection it may be noted that the two chimneys, being built of field stone, add a good deal to the interest of the outside walls. By passing through a small but conveniently equipped pantry one reaches the kitchen, which in turn opens onto a recessed corner porch, which could be screened in

summer and glassed in for the winter, if desired, to form an outside kitchen.

In the extension at the rear is a fuel shed communicating with the porch, and in the small entry which connects it with the kitchen are shelves and an ice-box that can be filled from outside. The rest of the extension is taken up by a dressing room equipped with a wardrobe and a lavatory which is reached from the rear hall.

The second floor comprises four bedrooms and a maid's room, with two bathrooms for the family and one

for the maid. In addition to the closets in the bedrooms there is an extra closet beside the bathroom, a linen closet in the hall and storage space under the roof at the rear. Ample provision is made for lighting and cross ventilation, and in two of the bedrooms fireplaces are built above those in the living and dining rooms. A box seat built into the recess at the end of the hall adds to the cosiness of the plan.

In this house no sleeping balcony has been included, but the exterior construction and the layout of the second floor could be rearranged to include one if it were desired. In fact, both this design and the one previously described are capable of considerable modification to suit different needs without destroying that simplicity and comfort which are such inherent characteristics of the true Craftsman home.

It will be noticed that in the floor plans of these houses, as in others which we have designed, built-in fittings have been shown only where they will fit into a suitable recess or wall space—a bay window, a fire-

CRAFTSMAN HOUSES DESIGNED FOR CLIENTS

DETAIL OF HOUSE
NO. 156.

THIS DETAIL SKETCH OF THE EXTERIOR OF THE CRAFTSMAN HOUSE SHOWN ON PAGE 690 GIVES ONE SOME IDEA OF THE INTEREST THAT RESULTS FROM THE SIMPLE USE OF SHINGLES AND FIELDSTONE: ALONG THE TOP OF THE TERRACE WALL IS A COPING OF CEMENT, AND THE WALL ITSELF IS INTEGRAL WITH THE CORNER COLUMN WHICH SUPPORTS THE ROOF OF THE RECESSED PORCH.



side corner or an alcove formed by the walls and roof on the second floor.

In fact, it is only when the arrangement of rooms and partitions happens to afford appropriate spaces that built-in furnishings can be used to advantage. We advocate them only where the interior is essentially suited to such treatment—where there is a recess or a wall which they will entirely fill; in other words, where they will be truly “fitments” in the sense in which the word is used in England.

In such cases the built-in fixtures become a permanent integral part of the interior construction, and by filling up the recesses or extending across the end of a room, they lessen proportionately the floor space and corners to be cleaned.

The owner should always remember that if such fittings are to add to the beauty as well as the convenience of the home, they must not only be well designed but well made. They will require well-seasoned wood and the work of a skilled carpenter; and the more closely the owner superintends the details of their construction, the better he will be satisfied with the result.

The exact design of the built-in features will naturally be governed by individual conditions and the owner's fancy and purse.

but in a typical Craftsman interior it is always best to keep the structure rather plain, relying on the practical lines and proportions of each piece and the natural interest of the materials to bring about a decorative result. The variations of tone and grain in the wood itself mellowed and emphasized by a Craftsman stain, and the warm glint of light and color in the hammered copper, brass or iron trim—all these things, while parts of a practical construction, can be made a source of real beauty by wise handling and good workmanship.

And so, if conditions are favorable—that is, if the plan will lend itself to built-in fittings, if the owner can afford the extra expense they must necessarily entail, and if he can be sure that a good quality of material and work will go into the making of them—he will find that they will add greatly to the comfort and interest of his home. They will lessen the amount of other furniture required, and being easily cleaned will help to minimize the housework.

But perhaps one of their greatest charms is the air of durability and sturdiness which they give to the interior. Their presence seems to set the seal of permanence and repose not only on the architecture but on the whole atmosphere of the home.

THE LAWN AND ITS CARE



THE LAWN AND ITS CARE

THE price of a lawn is eternal vigilance. Velvety turf in England, where lawn-making is an art, is the work of generations of painstaking gardeners. It results from beauty and purity of color, the unremitting toil and care bestowed on well-matted, sturdy grass plants, and upon the management of the lawn space in relation to other parts of the garden scheme.

A skilled craftsman can achieve a lawn which fits the surrounding conditions. Any contractor can grade, rake and level a flat space of earth into the semblance of a lawn, but it will not merit the name unless it melts gracefully into the contour of the landscape. Level lawns are seldom legitimate, except as playgrounds. There are few level spaces in nature, and a lawn which has long, easy-flowing lines is more restful to the eye.

Preparation for securing a well-favored lawn does not begin with shaking a packet of grass seed over the soil. It begins two feet underground.

Many lawns need underdraining, especially where clay is present in the soil in large quantities. Sandy soils do not require artificial drainage. Four-inch terra cotta or tile drain laid two feet deep will effectually carry off excess moisture where

THE OPEN SPACE OF THIS LAWN GIVES ONE A SENSE OF THE LOW HOUSE CROWNING THE HILLSIDE.

the hardpan or subsoil is impervious to water. Precisely as the garden earth is prepared for a bed of hardy flowers, so must the lawn soil be mellowed. Deep plowing and subsequent cultivation, the application of quantities of manure or other humus-forming material, and the supplying of deficient chemical elements essential to fertility, are the most necessary things to do even before there is a thought of grass seed.

When stable manure is used to provide organic material for a lawn, it should be well rotted and saturated with the liquid drained from the stalls. Only in this way can weed seeds, which are present in large quantities in fresh manure, be rendered harmless. Cow or sheep manure is especially valuable for lawn fertilization.

The soil should be plowed, harrowed and raked to a depth of not less than a foot, in places where the loam is shallow and the subsoil stiff. If the earth is acid, which a litmus-paper test will show, water-slacked lime should be applied at the rate of 1,000 pounds to the acre. It should be well harrowed in, and broken up by constant raking. Before seeding, roll the ground once to set the earth lightly.

Grass seed must be of the very highest quality to form a satisfactory lawn. De-

THE LAWN AND ITS CARE



partment stores and drug stores seldom carry the highest class of seeds. It is advantageous in the end to deal with the best seedsman or horticultural supply house in the neighborhood. The main ingredient in seed mixtures should be Canadian or Kentucky bluegrass. This makes the best sod, and forms matted roots capable of endur-

A SUNKEN LAWN WHICH GIVES OPPORTUNITY FOR OUTDOOR LIFE CLOSE TO THE HOUSE.

ing severe drought. Mix with this a very little white clover, and about a fourth part of Red Top, Pace's rye grass or Rhode Island bent. Local conditions will modify the choice. In shady spots wood meadow grass, *Poa sylvestris*, thrives best. It is



A LAWN WHICH SEEMS TO CONNECT THE HOUSE CLOSELY WITH GARDEN AND ORCHARD.

GARDEN MANAGEMENT DURING MARCH

useful for seeding under large trees. Bluegrass does not mature for three years, but the others will fill in meanwhile. Seed should be sown evenly and both ways on a lawn in order to get a good stand of grass. Don't sow on a windy day. A patchy lawn will prove your thoughtlessness.

After the grass has grown two inches high begin cutting it as a means of forcing luxuriant growth. Use a grass catcher on the lawnmower to avoid tearing the tender rootlets with either a wooden or iron rake. Water when necessary with a fine spray for several hours at a time, or else remove the nozzle from the hose and let it rest on the ground, allowing the water to soak slowly into the soil. Surface sprinkling does no good unless it is of long duration. It encourages the growth of top roots, and sods burn out in the sun as a result of such treatment.

Eliminate weeds whenever you see them. Keep cutting and watering the grass constantly. An occasional dressing in the spring with bone meal or wood-ashes will sweeten the soil and keep the lawn in prime condition.

Old lawns may be renovated and kept in excellent shape by plowing them and re-seeding. The sod turned under will rot and form a rich humus foundation. Dandelion and other weeds should be pulled out, and bare spots raked and seeded like miniature lawns.

Never shovel a path through snow across a lawn. The sod will be bare next summer. Top dress in January or February with fine manure, if you object to unsightly barnyard droppings. And roll down the hummocks raised by frost, when the ground is moist in March. Unless this is done a drought will ruin the sod. Grass roots must be kept packed down to get their nourishment from the soil.

A smooth-cut lawn, fringed about with specimen trees and shrubs, or herbaceous borders and shrubberies, adds greatly to the charm of house and garden. Beds of flowers may very properly be placed near the house, but at the far end of a lawn no broken colors should show. Massed planting of shrubs and trees should blend the lawn into the scene beyond.

Paths should not cross a lawn unless they are absolutely necessary, and then they should be unobtrusive, and, if possible, sunk slightly below the surface level. A worn grass path is more pleasant and graceful

than a graveled and crowned walk. Stepping stones imbedded in turf, conveniently placed, are acceptable in certain types of gardens.

Lawn clippings rot quickly in a composting pit and are valuable chiefly as a mulch for strawberry patches or beds of rhododendrons. They should not be left to shrivel on the lawn.

GARDEN MANAGEMENT DURING MARCH

PLAN your garden beforehand, on paper. Manure heavily. Plow and cultivate constantly, at least one foot deep. Doctor poor soils. Add lime or wood-ashes to sour land, sand to clay soils, and humus to sandy wastes. Prune fruit trees, bushes and vines. This is the last chance. Burn the prunings or utilize them for bloom as directed in another part of the magazine.

Spray the orchard with lime-sulphur for San José scale, before the buds swell. Spray everything about the place, except the evergreens, with Bordeaux mixture, for general cleanliness and health. Destroy the homes of brown-tail and gypsy moths. Apply iron sulphate to grapes before the buds start; wood-ashes to currants, peaches, pears and apples; bone meal or soda nitrate to the lawn after raking off the surface. Pick stones in the field. Start a compost heap with leaves and litter. Keep it under cover. Transplant shrubs, herbaceous plants and seedlings. Divide hardy perennials by breaking their roots into clumps and replanting. Plant nursery stock, trees, bushes, vines and garden vegetables. Toward the end of the month sow outdoors for early crops. Sow the following flower seeds: Pansies, sweet peas, candytuft, cardinal flower, cornflower, ageratum, spiderwort, Canterbury bells.

These suggestions apply to residents of the Middle Eastern States. Garden-makers living in the South, the West, or in Canada, will be guided by local conditions of climate and weather.

Moreover, in every locality the climatic conditions of the particular season must be taken into account when flower seeds are sown, since the vagaries of weather are very great, destined to influence all garden builders. The proverbial time for starting the garden is "when farmers begin to plow." And these are men governed not by the calendar, but by the almanac.

PRUNED FRUIT TWIGS FOR INDOOR BLOOMING

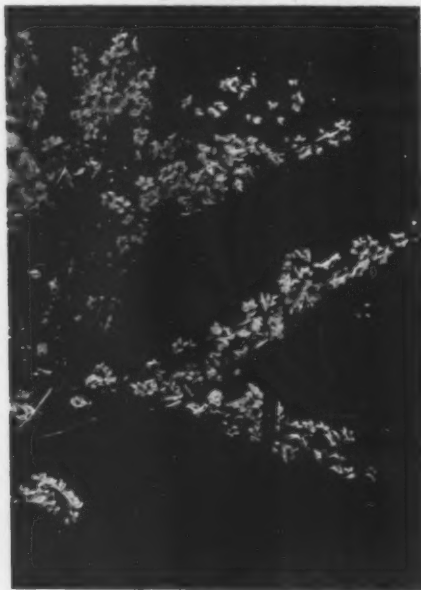
UTILIZING PRUNED FRUIT TWIGS FOR BLOOM

SPRING is often heralded in florists' windows several weeks before her time by huge masses of apple or cherry blossoms arranged attractively in jars. Behind plate glass windows, in warmed air, their delicate pink and white petals open freely even though it may be bitter weather out-of-doors, sharp enough to frost-blacken the hardiest orchard trees.

On the farm, or in the suburbs, the same results can be obtained, without sacrificing in any way the future fruit yield of the trees, simply by utilizing the branches that have been taken off at the time of annual pruning and by bringing them into a sheltered place indoors.

Late pruning is often a necessity with country folk, owing to the pressure of other work, and indeed March is the best time to do tree trimming, except in the far South where the buds sprout early. After the pruning is done, it is well to gather the brush into a heap and to sort out the branches which are to be forced into bloom.

Select well-budded twigs. There are two sorts of buds, leaf-buds and fruit-buds, each being recognizable by certain



PLUM BLOSSOMS, THE BRANCHES OF WHICH WERE PICKED JANUARY TWENTIETH AND WHICH BLOSSOMED INDOORS FEBRUARY THIRD.



A BRANCH OF APPLE BLOSSOMS PICKED IN A NEW JERSEY ORCHARD THE TWENTY-FIFTH OF JANUARY. BLOSSOMING INDOORS FEBRUARY SIXTH.

individual characteristics. Leaf-buds are long and slender, fruit-buds short and stout, and, as a rule, more rugged and scurfy in conformation.

Put aside symmetrical branches from each variety of tree. The greater number will measure from eighteen to thirty inches long. Keep apple, peach, pear, plum and cherry branches separate. Burn the brush that remains. If left about the place it becomes not only unsightly, but, a splendid breeding ground for San José scale, the modest but destructive borer, as well as for many other common garden pests.

Take the branches you desire to force into the house, after slicing off the bark with a sharp knife on opposite sides of the stem at the butt end. Be sure to cut through the outer bark and to bare the white wood underneath, but do not mar its surface. This is a trick of Japanese flower wizardry, and causes the buds to swell and

ABOUT GARDEN TOOLS



CHERRY BLOSSOMS BLOOMING INDOORS TWO WEEKS FROM THE TIME OF GATHERING IN A WINTER ORCHARD.

sprout much earlier than if the twigs were left in their natural state. The wood fiber soaks up the water by capillary attraction. Place each bundle of twigs into a stone crock or tall jar, partly filled with cool water, setting them later in the cellar, or in a closet, where very little light can penetrate, but where they will be sheltered. The temperature of the chosen place should not at any time drop below 50 degrees.

After ten days bring the branches into the light and remove the water from the jars. The twigs should appear plump and almost ready to burst, tiny flecks of green being apparent on the ends of the leaf-buds.

Refill the jars with warm water, adding to each vessel a tablespoonful of household ammonia. Set them in a warm room in a sunny window. They will need no attention for a week, when it will be necessary to change the water again, adding ammonia as before.

Three weeks from the day the twigs are brought indoors, they should begin to blossom and transform for the succeeding two weeks their entire surroundings into flower realms by their beauty and fragrance. In fact their period of bloom may be somewhat lengthened by keeping the stems in shade as much as possible.

The selection and arrangement of blossom-laden fruit branches and their disposal

in a room, is an interesting phase of interior decoration. The cult carries the advantages of cheapness; the ease with which enchanting results may be obtained, and the simplicity of Nature.

Jars of undecorated American pottery, rich in color, suit these blossom-laden twigs well for receptacles; also various forms of basketry supplement rather than detract from their individuality and the message of spring which they whisper to many ears.

A FEW WORDS ABOUT GARDEN TOOLS

HAVE you decided to make a garden this year, and find yourself handicapped by a lack of knowledge about tools? Here is a list of essentials, and March is a good time to buy them. Fifty feet of strong garden line, several dozen hardwood stakes about two feet long, a spading fork, spade, bow-headed rake, dibble, trowels, and a half-moon hoe, with a five-inch face, are absolutely indispensable. A wheelbarrow, a good wheel hoe, with cultivator, seeder and row marker attachments, pruning shears, and a four-gallon watering pot, are time-savers.

Buy only standard tools, for true economy. It is a good plan to brand tools with your name in some permanent way. A burning iron is a good investment and a protection against loss and borrowers.

Have a shed, or a corner in the barn, or better still, construct a simple tool house for housing garden implements. Make a rule never to put away a tool which is not ready for work the next morning. Save expenses by taking good care of the tools.

If you have gardened in past seasons, overhaul your tools now, and put them in order. A rusty spade cuts no sod. A dull hoe will give weeds a new lease on life. Knives, shears and lawn mowers want sharpening.

Now is the time to see to all this. If it isn't done now, it never will be. The spring rush will be here before you know it, with cabbages and tomato vines to set out, baseball will beguile you, and the garden will suffer.

Prepare for garden neatness also before the days come when time will seem to fly on magic wings. Construct a scrap basket of chicken fence wire in the simplest way possible, one readily conceived by the ingenious. Into such a basket unsightly things can be thrown and a match set to them at leisure.

THE CRAFTSMAN FRATERNITY

THE CRAFTSMAN FRATERNITY

A CERTAIN fraternal relationship exists always between people whose interests lie in the same direction. In a very large degree this is true of the people who make up the list of THE CRAFTSMAN subscribers. They are home-builders and home-lovers, and have a common interest in things pertaining to home equipment.

CRAFTSMAN SERVICE was organized as a means of cementing and unifying the scattered thousands of our subscribers. The similarity of problems confronting our people has made this SERVICE practicable. For example, the discussion of the question of a proper lighting system for a Craftsman house evolves certain information which is applicable to all similar cases, so that another subscriber with the same problem may avail himself of the facts which the first discussion shall have revealed.

The same would be true in the case of the selection of a proper vacuum cleaner, the choice of the best building material, and in a multitude of similar problems. In almost every case where questions of home furnishings or home equipment are concerned our experience with the problems of other subscribers will enable us promptly to give the required information.

We are able to be of practical help to our subscribers in a personal way. THE CRAFTSMAN for 1913 will be a handbook of reference for the home-lover; and we aim by means of our SERVICE to give to a subscription to THE CRAFTSMAN a unique and personal value which can be secured in no other way.

In this connection we append a typical letter which recently came to hand showing the sort of information we are asked to supply.

"The Craftsman, Service Department, 41 West 34th St., N. Y. C.:

GENTLEMEN—I avail myself of your Service Department to ask for information, or the way to secure it, respecting the best plan to heat and light a small country home where neither commercial gas nor electricity are available, having in mind also water system for bath and toilet and fuel for cooking. If possible to accomplish all with one plant, I should prefer that.

The prospective house is in northern New Jersey, Sussex Co., three miles from N. There are seven rooms—five on the first floor and two on the second floor.

There are chimneys in each end of the house

and while the openings are boarded up at present I presume a fireplace could be provided.

There is a cellar underneath the entire house. The only water to be seen is a well. I will suggest the end elevation.

It seems to me there must be some plan to get away from four different plants, viz., lighting, heating, cooking and water power.

I think that efficiency, economy both of first cost and cost of operation and safety should have due and perhaps equal consideration. I recognize some time and expense will be involved in this but will you do what you can for me at the least expense, as quickly as you can?

Very respectfully, C. M. B."

In this case we were able to suggest two possible solutions, requiring but two separate plants. This letter serves to point out the means of deriving benefit in a new and practical way through a subscription to THE CRAFTSMAN.

COMMUNITY OF INTEREST

IN the whole of life there is nothing perhaps that draws people more closely together, opening their minds with a rare responsiveness, than a strong community of interest. Two women, strangers to each other, will fall quickly into conversation over the way in which they have made their gardens; the reasons why their fireplaces have not been successful, or about their respective methods of serving their children. Men will readily unfold their ideas of craftsmanship, their aspirations and their hope of success in some chosen line to a plodder along the same road, while to an intimate of dissimilar taste they will reveal nothing of their cherished plans, nothing of their true selves.

Children, even are susceptible to the friendship that comes with community of interest. Boys who love books care little or nothing for those whose only thought is of sports; little girls who believe in fairies and cherish their dolls are timid and afraid before those of wilder moods.

Indeed it is obvious in all walks of life that people are more or less banded together by the hobbies that ride them. The more general and useful such hobbies, the more will all classes of men be brought into an understanding of each others' aims and motives. While CRAFTSMAN subscribers have in the main the interests of the Home and the Fireside there are, it would seem, many paths for them still to tread; gardens for them to enter and stony fields for them to cross together. Invariably the strength of fraternity is stronger than the individual effort.

THE SMALL FARM AS A FINANCIAL PROPOSITION



THE SMALL FARM AS A FINANCIAL PROPOSITION: BY W. H. JENKINS

AN occupation that does not return a labor income of \$1,000 to \$2,000 per year is not worth considering by the man who wants to support a family well. Only a few years ago the small farm was not desired by the enterprising competent business man, because its net income was too small to provide the modern needs and comforts of life. Very recently agricultural science has shown the value of the small farm in eliminating part of the grain bill for animals.

A balanced ration grown on the farm is now fed to cows whose capacity for making butter fat is four times greater than the average of 50 years ago. Science has almost eliminated the chemical fertilizer bill, by telling us how we can get nitrogen from the air and make mineral plant food in the soil available, through the decomposition of leaves, stalks and roots. Parcel post has brought the producer and the consumer closer together and its full development will do so completely. For these reasons the farm you may own, or are thinking of buying, may become your best investment.

Based on my experience and observations as a farmer, I desire to offer a program or plan, which I have demonstrated has given excellent results. I believe success is surer on a moderate-sized farm, if a scheme of dairying and diversified farming is followed. Some capital is necessary,—enough

ONE OF THE LARGEST FINANCIAL ITEMS IN DAIRY FARMING WITH PURE-BRED CATTLE IS IN THE ANNUAL SALE OF THE PURE-BRED CALVES.

to pay for the live stock and tools and quite a large part of the real estate; but most of all the fundamentals of an agricultural education at least are necessary for the best results. This does not mean four years at college. A man with a taste or love of agriculture can work out the problem satisfactorily.

Personally, I would want about 100



A STALK OF THE SOY BEAN SHOWING THE NODULES WHICH GATHER NITROGEN BACTERIA.

THE SMALL FARM AS A FINANCIAL PROPOSITION



COW FEEDING CONTENTEDLY AND LUXURIOUSLY IN A FIELD OF GREEN ALFALFA.

acres with a soil of good depth, naturally drained and easily cultivated. There should be some upland for pasture and fruit and a timber lot would be desirable. Such a farm can be purchased in good neighborhoods in the Eastern states for about \$6,000 to \$8,000. With two-thirds of the purchase money paid down, I would feel sure of being able, if I followed a definite business program, to release myself of the balance in a very few years.

On coming into possession of such a farm I would need a little ready money and would buy at least a high-grade bull with which to start my future dairy herd. I would make the cow stable warm and sanitary, with good gutters. I would use ground raw phosphate rock as an absorbent in the stable, which would retain all of the fertilizing value of the animal waste. This and a quantity of ground carbonate of limestone would be the only outside material I would buy. Then I would set to work to build up a soil which would feed my animals with but little expenditure for grain.

Using the solid matter and the liquids absorbed by the phosphate rock, I would apply both during the winter months as a thin dressing upon grass sod, scheduled for corn the next spring. Preferably I would apply it with a manure spreader. I want to say here that there are some farm tools which are almost indispensable. There should be ample machinery for preparing the soil for crops, harvesting and filing a silo, for the best dairy farming is not possible without using a silo. One reason for applying the manure evenly and thinly over

as large an area as possible every year is that it makes conditions favorable to the growth of soil bacteria, as well as acting as a plant food.

I would plow the ground for corn early in the spring, and harrow it occasionally till trees were in full leaf and the earth felt warm to the hand. In New York I would mix corn and soy beans, in the ratio of

2 to 1, and drill them

with a corn planter, 12 quarts per acre, in rows four feet apart. When cut green for ensilage, the corn and soy bean fodder would make a well balanced, succulent and palatable ration for dairy cows, with little or no grain. This recent development, if followed, should make dairy farming a profitable business. Experiments have shown that plants growing with recognized legumes, because of their association, absorb more nitrogen from the soil and contain that much larger proportion of protein.

Protein is the costly element the farmer buys in grain to balance his corn ensilage. The new method approximately saves him 25 per cent. of his cash outlay. This is not all, for the soy bean,—stalk, leaf and pod,—contains five times as much protein as the corn stalk, and when preserved with corn fodder makes an ensilage that is pretty nearly balanced.

There are reasons for giving the corn crop thorough cultivation, aside from the immediate yield of corn. The soil should be properly prepared for a seeding of alfalfa to follow. Cultivate frequently until the last of July, and then before the final cultivation sow between the rows a mixture of rye and vetch for a cover crop.

Before spring apply from 2 to 4 tons of carbonate of lime or 1 ton of quicklime to the acre to sweeten the soil or make it alkaline. Plow early in spring and inoculate the soil from an alfalfa field, by sowing the soil as you would grain, on a dark day, or harrow under quickly, if the weather continues fine. Some time in May when the ground is in good condition for working, sow half a bushel of barley to the acre and

THE SMALL FARM AS A FINANCIAL PROPOSITION

harrow in about an inch deep. Next sow guaranteed pure alfalfa seed, 30 pounds to the acre, 15 each way to get an even stand. Roll or plank in the seed very firmly. When the barley is in the milk stage, mow both for hay, and if the season is dry leave the final cutting of alfalfa on the ground as a mulch for the plants in winter. The field is now established. Alfalfa will feed your animals, save on the grain bills, and with it you can get the maximum milk and butter fat production. It is not possible to produce as much milk or to produce it as cheaply otherwise.

Alfalfa will fill the soil with a mass of roots, which after decaying will feed any crop you may wish to grow after plowing it up. Alfalfa sod will grow the finest potatoes ever seen, and all the vegetables and fruits. Dairy farming, in connection with potatoes, fruit, or any other crop which can be advantageously marketed in your locality, is thus seen to be the most profitable kind of a business venture. Supplementary crops help cover the pay roll and keep down expense, generally. They should be grown after three years of cutting hay from the alfalfa field to get the best results.

With such a plan of farming only a small pasture is needed, which of course must be supplemented by green alfalfa or ensilage in summer, and preferably ensilage. The winter ration will be alfalfa hay, probably some mixed hay, and a little grain, in addition to ensilage.

This ideal ration for the dairy cow is succulent, fairly well balanced and grown right on the farm. It reaches its greatest value when fed to high-grade cows. It would be beyond the means of most farmers to buy a herd of pure-bred cows, but they can breed up such a herd in a few years by investing at the start in some pure-bred animals. If a farmer has a neighbor owning a pure-bred sire all he needs to do is buy a few cows of similar breed. I know a farmer who started ten years ago with only two animals, who now has a herd of 25 head worth \$500 each. The business has netted him about \$1,200 a year.

The best way is for the man of small means to buy a herd of high-grade cows and breed up, gradually replacing by pure-



A COW FED FROM FARM CROPS AND GIVING FIVE HUNDRED POUNDS OF BUTTER A YEAR.

bred animals and disposing of the grades. A cow-testing association will often help him get the use of a good sire for a small price. He can slowly eliminate cows that bring in no profit.

In ideal dairy farming the best disposition to make of the milk is to manufacture butter on the farm, or sell cream; for skim milk and buttermilk are extremely valuable by-products fed to young stock. A ton of market milk sold from the farm carries off just so much fertility which must be replaced. A ton of butter contains practically none. The new parcel post suggests the possibility of the farmer shipping dairy products direct to consumers in the cities at prices materially benefiting both. One farmer in New York has for years marketed the butter made from 100 cows and the poultry products from several hundred hens, shipping by express directly to his customers in the city. Parcels of country produce may be sent up to the limit of 11 pounds.

While the main income from the sort of farming I have indicated comes from the sale of dairy products and breeding, and cash crops of potatoes or fruit, there are additional sources of income. Poultry, kept in connection with alfalfa dairy farming, can be made to pay well. A young man near my place shows a net profit on his books in one year of \$1,000, produced by selling eggs for hatching and by breeding stock.

I believe I can offer no more convincing argument than to present the balance sheet of a farmer in my neighborhood who has fed a herd of pure-bred cows in a manner similar to that I have outlined.

COLOR ARRANGEMENT IN GARDENS

Receipts.

Milk from 25 cows, 6,000 pounds each, market price	\$2,250
Surplus pure-bred stock sold	2,000
Cash crop of potatoes	500
Value of fruit and vegetables used by family	300
Timber and fuel from wood lot	100
Poultry products	20
Total	\$5,170

Expenditure.

Grain bill for 25 cattle at \$6 a head ..	\$150
Labor bill (one man full year, house free, helper in the summer months)	800
Repairs on buildings, machinery, wagons, tools, seed	500
Taxes and insurance	150
Interest on investment of \$10,000 ..	500
Total	\$2,100

COLOR ARRANGEMENT IN GARDENS: ITS IMPORTANCE AND PROBLEMS

TO show color strong and vibrant is perhaps the dominant purpose of the true American garden, a purpose strikingly at variance with that of the time-worn gardens of Italy wherein architectural outlines and greenness in full and plenty are the standard of all classes. But while in America color is much desired, it is not always used so as to give attractive results. On every side the cry is heard that our gardens teem with colors blatant and screaming, that our blues are over-ridden by magentas, our pinks by vivid scarlets. Phloxes and nasturtiums we declare we must have, and they are unruly elements.

The following words come from a sincere striver after color harmony in a garden of more than usual charm: "Had I known those sweet Williams would bloom in a clear shade of cherry, I should not have planted them beside the late blooming pink irises. And my marigolds spoil that border; their yellow is powerful, completely over-riding every other tint in the garden. Next year I shall plant them solidly, perhaps as a border bed in front of the grape vines. The butterfly weeds are set in that snug green corner yonder this year and they will be lovely now that there is noth-

ing near to be cast into gloom by their exhilarant color."

"Do you move your plants about every year?" was asked. And the answer was:

"Invariably at the planting season. Otherwise I could not even hope to approach color harmony in the garden."

Indeed in so doing lies the possibility of securing one day an altogether satisfactory arrangement of flowers. For only by continuous observation and the elimination of obtruding colors can the scheme of a garden ever be satisfactory to the artistic eye. Although it may be fairly pleasing one season, this fact does not of necessity mean that it will be equally so the next year. Seeds vary greatly in quality, not always bearing flowers that unfold the expected shades of color; while many plants, especially such as the garden phloxes which have been evolved from the wild and hybridized to a great extent, often revert to their native colors. A great clump of phlox that has been the salmon pink asset of a garden for several summers may without word or warning suddenly bloom flamboyantly in the tones it wore in its native state, a crude magenta, setting all else on edge. When thus a plant determines willfully to revert, it forestalls all efforts of man. It becomes simply a necessity to remove it should its color appear intolerable and for the space then exposed other provision must be made.

It is not always because garden owners are careless or lacking in taste that their gardens show reprehensible arrangements of colors,—it more often occurs because absolute color harmony in a garden is a very difficult thing to attain, one requiring much patience, labor and the love and understanding of plants along with an artistic appreciation of color values.

To begin to plant a garden without some definite scheme in mind is simply to set out on the road of disenchantment. When the country home is building and the plan is made for the grounds and garden, the entire color scheme should be one of the salient points of decision. A house constructed of brick requires to be offset by very different planting from one made of concrete or clapboards. Houses of red or "Tapestry" brick cannot be made to appear at ease with red geraniums, salvia, red canas, nasturtiums, magenta-colored petunias, phloxes, or many of the red, crimson, pink and magenta blooms that give a brilliancy

COLOR ARRANGEMENT IN GARDENS

and poise to a concrete house, the tone of which has not yet mellowed. A log house or bungalow would be sadly handicapped by a nearby garden made of delicately tinted bedding plants. It would appear to nestle more snugly with the landscape should the planting show the bright scarlets, the blues and yellows of nature's most striking wildlings.

The crying difficulty with many gardens is that too much is attempted, too many varieties of plants are used, too many colors expected to blend with their surroundings, the atmosphere, the earth and the sky. Many of the most appealingly beautiful gardens are those of few flowers, few varieties of plants.

As soon as the general color scheme of a garden is decided upon the individual plants should be chosen to give it vitality. This is pleasing work. The colors of spring, also of early summer are mostly young and tender without the high spirit of rivalry. The soft pinks, the delicate yellows, the azure blues, lilacs and whites seldom clash with each other, provided only that some slight amount of care is given to their distribution. Color harmony in the spring and early summer garden is not difficult of attainment. Midsummer, however, when annuals and tossing perennials are at their height of bloom, is the heyday of color discords, the time of all others when a garden can put gray hairs into the head of its owner. It is at this season, when prolonged drought is likely that consummate art is required to keep the garden presentable. The yellows have a way of making themselves obnoxious; the idea of sunlight that gleamed through their early spring tones has become lost in their flaunting self-sufficiency. In midsummer the yellow lilies, the blanket flowers, coreopsis, sunflowers and goldenglows come into the garden. So terrified of them are now many garden builders, owing to the wild damage they can do if not skilfully placed, that with a sweeping hand they exclude them altogether. But this plan denotes somewhat of lack of courage. Better it were to accept them as high notes advantageous in certain places and there to grapple with them than to give them no entrance fearing the harm they can do.

Although the idea is at variance with public opinion, yellow,—that is the yellow of midsummer, is one of the most difficult colors to handle well. The average garden

builder thinks that it can be used indiscriminately like green or white. Would that he were sound in his conviction! As a matter of cruel fact yellow in its intensity gives no more pleasure to look upon continuously than can be gained from gazing at the sun. It is too bright, depressing other colors, provided always that it has the advantage of nearness. Beside blue in its paler shades it has a particularly unfortunate effect; its absorbing power is much less apparent when near pink. To see yellow however, in its full glory it should be placed where green is abundant as in a dell a bit dark and shady. It also is seen at its best planted en masse offset by purple. This idea when carried out in pansies is forceful and charming in the extreme.

Blue is another color that needs careful handling in a garden. Not because it has like yellow, the sting of too much brilliancy, but because it is soft and sweet and can be easily effaced by either red or yellow. Blue flowers are invariably lovely when beside white ones. Blue larkspurs when well massed and balanced by strong clumps of Madonna lilies, *Lilium candidum* are an imposing sight affording true joy to the eye keen for the delights of color. Seldom can there be too many blue flowers. They know not the meaning of the word intrude. Among the early plants the dainty Siberian squills are blue, there is a hyacinth fairly blue, irises can be found in blue merely tinted with pink. Then there come ragged sailors, larkspurs, *platycodyons*, *campanulas* and lupines, asters turning strongly to purple, blue lobelia, *Lobelia syphilitica*, a tall brilliant beauty and the annual dwarf lobelia growing no higher than four inches and having the ability to form a border as neat as a band of bright blue ribbon. The gentle forget-me-not can be grown in the moist spots of a garden, by a pond or stream. When placed where it appears to carpet the earth for white Japanese irises its own loveliness is accentuated.

While there is danger that the blues may be lost in a garden, there is the more salient one that the reds, and especially the magenta, will strike a note altogether too high. In fact in America there has recently come to the front a desire to abolish magenta altogether. It is felt to be too striking, too insistent in its quality of color. Yet this wish is not shared by the professional gardener who likes the richness of ma-

FOR THRIFTY GLOSSY PALMS

genta, feeling that it gives accent to his other colors. That it is difficult to abolish is true since it is the color to which pink flowers revert, a fact probably owing, as scientists teach, to its being the one peculiar to the zone in which most American gardens are located. The magenta that comes with the phloxes and petunias is very trying, infinitely more so than that which occurs among the peonies. The most dreadful bit of color arrangement in a garden that can be imagined has shown itself season after season at one of the great estates touching Long Island Sound. There a wide bed of magenta petunias is intercepted every now and then by standard heliotropes. Yet this is the work of one of the most authoritative gardeners in the country and can only be excused by the supposition that he and those he serves are color blind.

The Japanese get accent in their gardens by using a touch of black, something possible to them, since they have a black iris. It is placed near those of most vivid and alluring shades, that the idea of death may heighten the effect of the intense free life which they illustrate. Dead twigs are similarly used by the Japanese at seasons when the black iris is impracticable.

In old European gardens that have stood the test of generations, foliage plants have been largely used to hold the more riotous colors of flowers in abeyance. The custom is likewise growing in this country where frequently leaves of golden brown and green tones are interspersed wherever their softening note is necessary. In large gardens the Japanese maples and cedars (*retinosporas*) showing respectably warm rich, wine-color tones, browns and deep greens, copper and lemon yellow have been used to give accent in needed places as well as to keep exceedingly high colors from vying with each other.

Under many circumstances this plan is better than an indiscriminate use of white flowers which have of late been handled so carelessly between other colors that a spotted, detached look has been cast over innumerable gardens. One white flower there is charming in the late season for its sprightly appealing grace, *Hyacinthus candicans*. It raises its slender stalk of white bells uprightly and is sufficiently open not to block the sight, the eye passing through and beyond it. It can occur again and again in a garden and not be in the least obtrusive. Bulbs of the plant are not at all costly—

three dollars a thousand—and should be used in great numbers. Its value is very different from that of the immense clumps of feverfew that appear so plainly white in many young gardens.

Stocks and snapdragons can usually be grown together without clashing since their colors show soft pinks, delicate yellows, rich rose and wine color, soft and velvety in appearance. Few plants are more beneficial to the midsummer garden than their improved strains.

Naturally the gardener must look out continuously for wild irrelevant colors that freak-fashion crop out unawares seeming to have lost all sense of family or tradition. Because they have bloomed in his garden is no excuse to allow them to ruin its effect as a whole. With stringent courage they must be denounced.

But color arrangement in a garden is something that can no more be taught than the mixing of colors on a palette. Simply to him who plans and builds a garden there is usually an individual conception of it having heightened value when open to experience and suggestion.

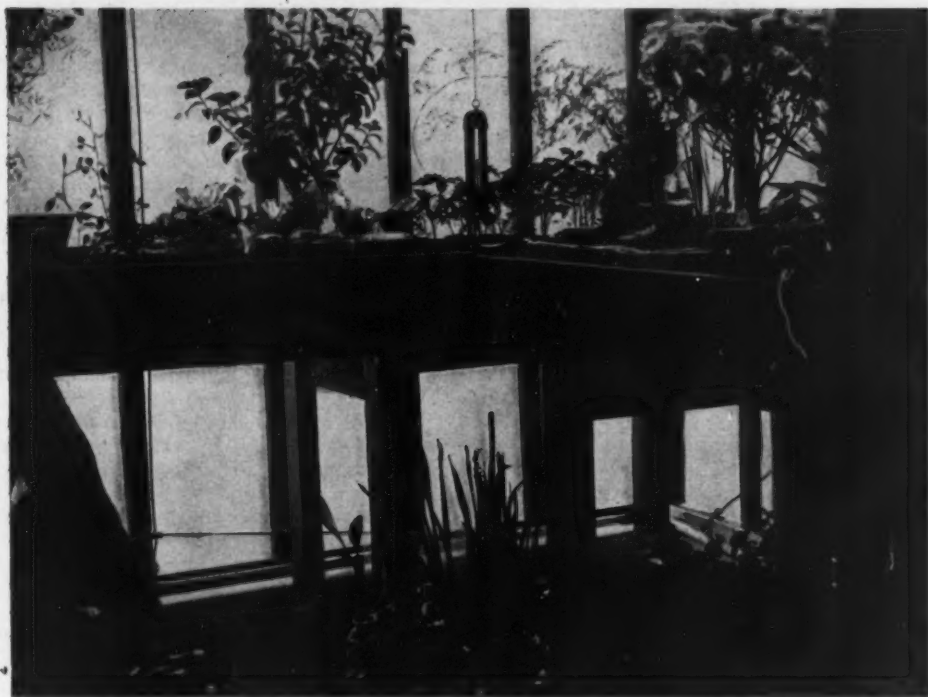
FOR THRIFTY, GLOSSY PALMS

A FRIEND whose palms are the surprise of her neighborhood washes the leaves often with water and frequently with sweet milk, the former affording the cleanliness they need to *breathe*, while the milk nourishes and gives a beautiful gloss. To feed the roots she occasionally inserts diced bits of fresh beef deep into the soil, and once in a long while a spoonful of castor oil is put into their drinking water. This treatment suggests human ways, but her plants are a proof of its efficacy.

Instead of the castor-oil and beef treatment for house palms many prefer, when the plants are ailing, to pour over their roots a pint of olive oil; the cheaper Italian grades serving well for the purpose. This amount applies only to large plants and rubber trees of good size.

Nowhere are various kinds of palms, rubber trees and aloes, in fact green-growing things, more to be encouraged than in the flat and apartment houses of large cities, places remote in feeling from the free life of the country; in such places plants, lusty in growth, are capable of playing a part in softening this impression and in making the out-of-door world seem less inaccessible.

PROLONGING THE GARDEN PERIOD



PROLONGING THE GARDEN PERIOD BY AN EARLY START

SIX weeks may be added to the usual gardening season by starting vegetable and flower seeds indoors, and neither an expensive greenhouse nor a troublesome hotbed is necessary to have succulent vegetables, or garden bloom, when your neighbor's seeds are just beginning to germinate outdoors.

Market gardeners, whose business it is to supply the public with delicacies in or out of season, have made use of the greenhouse, simply because of the necessity for larger production.

But any one, who can provide similar conditions to those existing in a greenhouse, with reference to light, heat and moisture, may start his few dozen plants with no inconvenience, and achieve results as good as if the most expensive of U-Bar structures had sheltered their birth.

Any Craftsman house that has a glassed-in porch, or a room with a sunny southern window, can be turned, during the late winter months, into the semblance of a greenhouse. The first requisites for porch or in-

AN INDOOR ARRANGEMENT FOR SEPARATING VEGETABLES AND WINTERING OVER TENDER FLOWERS.

door gardening are plenty of sunlight, a temperature of not less than 45 degrees at night and about 65 or 70 degrees by day and some moisture in the air and seed bed. With these essentials, flat boxes of earth for sprouting the seed, and the right varieties of seed, you can grow garden plants cheaper and better than you can buy them, and have your vegetables and cut flowers on their way to your table fully a month before their usual appearance there.

Only the simplest kind of carpentry is necessary to make the "flats" which professional gardeners use for seed beds. The lumber need not be more than a half inch in thickness. Make the boxes about 4 inches deep, 2 feet wide, and 3 feet long, for convenience in lifting. Nail or screw them tightly at the corners. Bore a few half inch holes in the bottoms for drainage, and set them on a wide shelf under the sunny window, or over trestles on the enclosed porch, where they will receive the maximum amount of sunlight. Your miniature greenhouse is now established, except for one thing,—a moisture-laden atmosphere.

PROLONGING THE GARDEN PERIOD

Should there be a stove on the porch, be sure to keep a pan of water evaporating on top of the stove, or on the radiator, if your heating apparatus is steam or hot water. Nothing is more fatal to growing plant life than a dry, devitalized atmosphere. Coal gas or illuminating gas must also be excluded. The air in the room where your plants are to grow must contain oxygen, and sufficient provision be made for allowing fresh air to enter from outdoors occasionally, where it will not strike the tender seedlings.

With correct conditions of sunlight, artificial heat, and moisture accounted for, the flats are ready to be filled with soil, and the seeds sown. Special soil must be prepared for indoor seed beds.

To a bushel of ordinary garden soil, which contains clay, add a third each of old, well-rotted, short manure, and coarse sand. If manure is hard to get, leaf mold, the floor covering of woods, may be used in the same proportion. If you are a city gardener, however, and can't get either by going out-of-doors, any florist will supply you with what you want for a small outlay.

Thoroughly mix the three ingredients, screening them through a quarter-inch ash sifter. Lay the screenings on top of some broken stone or pottery in the bottom of the flats, and strew with them a handful of finely broken charcoal. This will help to prevent a fatal fungous growth in young plants known as "damping off." Put on more sifted soil, and tamp it down with a block of wood, called a seed board, which can be fashioned at home.

Small clay pans, about a foot long, eight inches wide, and two inches deep, may be bought and used as flats, with rather better results, for then only one kind of seed need be sown in each pan. The advantage of keeping them separate is great. A pane of glass must be placed over each pan to conserve moisture, by the prevention of evaporation. When the seeds sprout, and put forth their leaves, this glass cover ought to be removed at once. As all seeds do not germinate at the same time, promiscuous sowing in flats is attended by some trouble. It is wise to get seeds of contemporary habit in the same flat.

When the soil is solid under the seed board, soak the contents of the boxes or pans thoroughly, and let drain for half an hour. Then sift half an inch of finely pulverized soil, or leaf mold, through some

wire mosquito netting over the wet soil, press a ruler into the surface to mark off three inch rows or furrows, and sow the seed in these depressions, covering them with about their own depth of soil. Top watering is a poor practise, as it often floods the seed bed and washes off tiny seeds. By the former method, the soil soaks up the moisture it needs in a few minutes, and a more even distribution of water is effected by soaking than could possibly be done by the finest rose spray.

The seeds will probably not need watering again until they have germinated, which may take a week or more, but usually two or three days.

A word about seeds. Order only such varieties as will fit in with your "paper garden" scheme. Buy from none but reliable firms of seedsmen. The stuff displayed at drug stores and grocers is more than half trash, and you will be bitterly disappointed if you buy it.

Below is a list of vegetables and flowers which may be started in the indoor greenhouse and later transplanted to more permanent homes outdoors.

From February 1 to March 1 sow successive plantings of cabbage, cauliflower, lettuce, tomatoes, parsley. From February 15 to March 15 sow beets, brussels sprouts, early celery, lettuce, tomatoes, eggplant and melons. From March 1 to April 1, cucumbers, eggplant, peppers, squash, late tomatoes, parsnips, carrots, celery.

The following flower seeds may also be sown at any time, preferably about March 15, for the best results: Asters, ageratum, begonia, canna, cardinal flower, campanula carpatica, centurea Montana, carnations, erigeron glabellus, mignonette, papaver nudicalle, gaillardia, geranium, heliotrope, petunia, salvia, verbena, ten-weeks stocks, penstemon campanulata.

No water should be poured directly on the surface of the seed bed, but a piece of cotton cloth of the same size should be spread over it, and water sprayed on this. When the seeds have sprouted this will be unnecessary. As soon as the little plants have put forth their second, or true leaves, they are ready for transplanting into other flats or pans.

Remove them gently from the bed with the flat end of a home-made dibble, whittled from a pine shingle, and lower them into their new quarters with some soil clinging to their rootlets. They ought not to be

CRAFTSMAN GARDEN ARTICLES

placed closer than three inches apart each way. Water moderately, and keep out of strong light for two or three days until the plants take hold. Then let them have all the sun and air they want.

Seedlings may be transplanted directly into four or five-inch pots, instead of the second flats. The pots can be filled with the same kind of soil that is in the seed bed. As soon as they are old enough they can be turned out of the pots and put into the ground.

They may be hardened off by taking the flats outdoors during the day, in bright warm weather. After about a week of this sort of treatment, if the season is mild, they can be left out all night.

A cold frame is easily contrived from some old lumber and window sash, or cotton protecting cloth. The plants will even stand a little freezing o' nights, but they must be thawed in the shade afterward, or they will die.

By April, the first sowing of cabbage, lettuce and tomatoes will be able to withstand the rigors of an open-air life, and they may be removed to the garden.

If the dreadful "damping off" rot appears, attacking the fragile plants at the surface of the soil while they are still indoors, prompt action is necessary to save them. Dry the earth in the flats by suspending them over a radiator or the kitchen stove at night, but do not let the earth burn and destroy the humus. An even heat is all that is required. Sometimes a small shovelful of fine sand, heated, sifted over the plants and stirred into the surface soil, will destroy the pestilent growth. But charcoal is a good preventive. By keeping the seed bed not too wet, and airing frequently, no serious trouble need be anticipated.

As soon as the young seeds begin to sprout remembrance of all the trouble that has been taken in planning and arranging for their sowing vanishes, since they then grow rapidly, affording daily interest to the plant lover. It seems even as though they use nights as well as days for growing, often making astonishing progress. In general when they are about two inches high some thought must be taken as to their transplanting. This sometimes is done by setting them first in inch pots, again they are able to go directly in the garden. As a rule the more times a young plant is transplanted the more compact and hardy its rootstalk.

INDEX OF BACK NUMBERS OF THE CRAFTSMAN CONTAINING ARTICLES ON GARDENING

Porches, Pergolas, and Balconies,	March, 1906
Mrs. Burnett's Rose Garden in Kent,	August, 1907
The Hartford Method for School Gardens,	September, 1907
Art in Ornamental Planting-Landscape Gardens,	April, 1908
Gateways, Old and New—Garden Entrances,	June, 1908
The Little Gardens of the Eastside,	July, 1908
Intensive Farming for City Folk,	July, 1908
Backyard Gardens,	April, 1909
Lawns and Gardens,	April, 1909
The Use of Water in Little Gardens,	April, 1909
The Garden as a Civic Asset,	May, 1909
Gardens for Pleasure and Profit,	June, 1909
Concrete Garden Ornaments,	August, 1909
Gardens in the Air—Roof Gardens,	December, 1909
The Garden City Movement,	December, 1909
A Living from a Three-Acre Farm,	February, 1910
Craftsman Gardens for Craftsman Homes,	April, 1910
Three Acres and Chains,	April, 1910
A Garden for the First Year,	May, 1910
Twelve Best Perennials,	June, 1910
Violet Growing for the Market,	July, 1910
Japanese Effects for Small Gardens,	September, 1910
Landscape Treatment for Craftsman Houses,	November, 1910
How to Water Plants,	November, 1910
The Sunken Gardens at Denver,	November, 1910
December Gardening,	December, 1910
How to Plant Evergreens,	January, 1911
Backyard Gardens from Japanese Inspiration,	March, 1911
The Path in the Garden,	March, 1911
Practical Ideas on Kitchen Gardens,	April, 1911
The Growing Individuality of American Gardens,	April, 1911
The Family Fruit Garden,	April, 1911
Pergolas in American Gardens,	April, 1911
The Philosophy of Gardens,	April, 1911
The New Dahlia,	April, 1911
Planting Around the House,	April, 1911
Water Gardens,	June, 1911
Gardens in which to Live and Play,	June, 1911
How to Plant Poppies,	June, 1911
Simple Water Gardens,	June, 1911
The Gourd Vine,	July, 1911
Box Gardens in City Windows,	August, 1911
Attractive Gardens for Birds,	February, 1912
Garden Herbs,	April, 1912
Flowers for Rock Gardens,	April, 1912
Flowers for Late Planting,	May, 1912
Windbreaks,	July, 1912
Planting the Schoolyard,	September, 1912
(These magazines can be had by applying to the Garden Department, THE CRAFTSMAN, 41 West Thirty-fourth Street. Price 25 cents per copy.)	

CRAFTSMAN REAL ESTATE DEPARTMENT

THE RELATION BETWEEN THE CRAFTSMAN REAL-ESTATE DEPARTMENT AND COUNTRY LIFE

COUNTRY life furnishes a solution for a surprisingly large number of social problems. It counteracts the artificialities of city environment and brings man back to the bedrock truths of nature. Pure food, pure air and thoughts directed toward the simple things connected with the natural products of the land are the best life insurance. The healthfulness of country living, to say nothing of its advantages in the way of pleasant and profitable exercise and amusement, accounts for increased demand for country and suburban property on the part of city people.

Because of its long advocacy of country living, THE CRAFTSMAN is especially gratified at the interest which the announcement of our new Real-Estate Service has aroused on the part of people in search of country and suburban homes. We feel that this is a direct response to years of effort on the part of THE CRAFTSMAN to point out what it regards as the most satisfactory mode of life.

The feature of our Real-Estate Service, which seems especially welcome to people who wish to move to the country, is our policy of acting in the interests of the investor only. We promote no particular neighborhoods or developments. We are simply gathering together the facts relating to home sites, suburban properties and farms, which are available to the home-seeker, and this information is gladly placed at his disposal. In addition to this, we are investigating the merits of properties listed with us and advise without charge as to their desirability.

We know of no other service where the home-seeker may obtain information and advice of this unbiased character without subjecting himself to the bombardment of the usual "selling campaign."

During the past month we have listed available and desirable properties in nearly all accessible neighborhoods around New York, also informing ourselves in regard to properties in many other sections. For instance, we are able to recommend some very desirable and inexpensive bungalow sites along the Maine coast, as well as interesting properties in other States.

We invite those who have property for sale which would be desirable for the purposes here outlined, to communicate with us, and a blank will be forwarded for listing. As we have stated, however, our chief service is to the investor. Those who are subscribers to THE CRAFTSMAN and wish to invest in a country or suburban home, are welcome to the information we have collected. Write to THE CRAFTSMAN REAL-ESTATE SERVICE DEPARTMENT, 41 West 34th Street, New York City.

IT WILL WELL REPAY CRAFTSMAN READERS, WHO ARE INTERESTED IN BUYING MATERIALS FOR HOMEBUILDING, TO EXAMINE CAREFULLY THE ADVERTISING PAGES OF THE APRIL HOMEBUILDER'S NUMBER. THE BEST GOODS IN EVERY LINE WILL BE REPRESENTED. OUR SERVICE DEPARTMENT WILL TELL YOU WHICH IS BEST FOR YOUR PURPOSE.

WHAT TO PRUNE AND HOW TO SPRAY



WHAT TO PRUNE AND HOW TO SPRAY

MANY homeowners are deterred from establishing even a small orchard or fruit garden, by the idea that expert professional attention is indispensable to its maintenance. Success in fruit culture depends somewhat upon climate, proper soil and cultivation, but yet more largely upon knowing something about the care of trees, bushes and vines. It has been the experience of nurserymen who have sold young trees to the public, that neglect is the main cause of so many failures to realize good crops.

Most people know that pruning is done to remove dead wood, to take out crossing branches, to shape the tree well, or to ensure better fruit; but the reason why this is done, or how it should be done, is unknown to them. Tree butchers have prejudiced the amateur against attempting the art. But intelligent and proper pruning may be done by anybody who will pay strict attention to a few simple principles and use common sense.

Late in the winter rather than in the autumn is the time for such work, as trees are more dormant toward spring, also because a severe winter will often kill back the branches below the cuts, which involves do-

CUTTING BACK ONE-THIRD OF THE YEAR'S GROWTH ON A YOUNG APPLE TREE.

ing the work all over again. Pruning should never be done in freezing weather, nor should it be left till the sap has swelled the buds; in either case a serious loss of vitality will result.

The tools necessary for the work are a knife of somewhat peculiar shape and exceeding sharpness, or a pair of heavy pruning shears, and a saw. The cost of the whole outfit need not be more than three dollars.

It is erroneous to suppose that pruning is a mysterious business. In half an hour enough can be learned of its fundamentals to enable the average man to care for his own orchard. Since different fruits require different methods of treatment, it is advisable to take one kind at a time, giving directions separately for each variety.

For an example, let us begin with the apple. To obtain the best of fruit from an apple tree, it must be pruned rather severely. All spindly shoots which grow on the inside surfaces of the main branches must be ruthlessly removed every year; they are useless encumbrances commonly called "suckers." The term adequately describes them, since they absorb much of the life blood of the tree that would otherwise go into the true fruit-bearing wood. In addition

WHAT TO PRUNE AND HOW TO SPRAY



SPRAYING A DORMANT TREE IN WINTER TO KILL SAN JOSÉ SCALE.

to the removal of the unwanted wood, the whole tree should be shaped and trained in such a manner that it will bear the most fruit, of the best quality and low down, to minimize the cost of gathering, with the least amount of likelihood that the branches will break in the stress of wind or storm.

All dead wood and useless branches must be cut out of the tree first. Where the growth of one branch will injure another by rubbing it, or crowding it, sacrifice the weaker branch, or the one which will alter least the symmetry of the tree. Apple trees should be headed low for convenience in picking and spraying, of which more will be said later. About one-third of the current year's growth should be pruned to achieve this result. If this is done from the start, taking care to cut back to an outside bud, and removing the interior growth, to allow plenty of sunlight and air to reach the blossoms and fruit, the tree will be a comely and useful member of the orchard family. Care must be taken also not to leave a shoulder or stub after the pruning is done. This can be accomplished by making the cut parallel with the branch that is being pruned and flat with the branch.

Under no circumstances cut back on the two-year growth, for it is on this wood that fruit-buds appear. On trees which have matured the annual growth is less vigorous, and therefore pruning is not required to such an extent as it is with younger trees.

Many fruit growers and tree surgeons paint the exposed surface of a tree or limb after pruning. Tar, white lead, and carbolineum with soap are used for this purpose.

It is said that painting prevents decay and fungous growth. On the other hand, many practical tree men use no covering whatever, asserting it is unnecessary. Excellent results have come from both systems. It is therefore largely a matter of personal experimenting.

Pear trees need less pruning, because they are more naturally of dwarf habit. The characteristic spurs of pear wood bear the fruit, and when they develop, little or no pruning is necessary. Trees that are pyramidal in habit need to be cut low-headed, of course.

Peaches, and their near relations, apricots and nectarines, bear their crops upon new wood. An effort should be made with them to remove all old wood that seems lacking in vigor for making new wood. Peach trees are liable to rank growth while young and throw up hosts of branchlets, which for a year or two will be literally burdened with fruit. But this ambition results disastrously for the tree, which kills itself by overbearing. The orchardist must watch this propensity and thin out such varieties vigorously.

The plum may be classified by its habit of fruiting all over. In early spring its branches from the main trunk to the tips of the tiniest twigs, are rosy with bloom. Severe pruning is necessary to get a good quality of fruit, which sets more abundantly on plum and cherry than other trees. Elimination of at least two-thirds of the present season's growth is needful for a fair

WHAT TO PRUNE AND HOW TO SPRAY

crop. Even fruit-buds may be sacrificed here, because where Nature has been so prodigal man may use discrimination. Inside branches should be cut out frequently and the tree kept as low-headed as possible. The habit of most plums is dwarfish. They respond to treatment easily. Particular attention must be paid to crowding branches.

Cherries require less pruning than other fruits after they have arrived at bearing age. An annual house-cleaning for the removal of dead or weak wood is all that is really needed for the health of the tree. Fruit is borne in clusters on spurs.

Quinces are naturally dwarf trees, and except in rare instances, after the shaping of youth, need no pruning whatever. Their fruiting tendency is prolific and all the new wood, which grows slowly, is immediately occupied by the tree to carry fruit.

Cane fruits such as raspberries and blackberries, require annual and harsh pruning to secure crops of any excellence at all. Old wood, or canes that have once borne, should be cut off level with the ground immediately after the berries are gathered. Leave only three or four new canes, easily distinguished by their smooth, bright-colored bark. Prune their tips back one-quarter of their growth.

The three or four canes which are left naturally receive all the nourishment in the plant. Sprouts from the roots make their appearance annually, and after two years are the fruit-bearers.

Currants and gooseberries may be treated in much the same manner. Three-year-old wood had better be sacrificed. Its opulence is past. In cutting out the useless branches, sever them close to the ground and thus give the aggressive new shoots, which appear in the middle of the bush, a chance to get their diet of sun and air. It is important to the health of the bush that these youngsters have unrestricted freedom.



BRANCHES OF AN APPLE TREE BADLY INFESTED WITH THE SAN JOSÉ SCALE.

Spraying is an absolute necessity. No matter what sort of fruit is being raised it ought to be sprayed. The point of view of the New England farmer that "his grandfather raised fruit without any such new-fangled notions" has altered considerably since the advent of the San José scale and numerous other pests and enemies to horticulture. Scale is easily recognized. A single specimen looks a good bit like a fly speck, centered in a circle of brown or reddish bark. If a tree is overrun with scale the branches have a scurfy appearance, almost as if they had a heavy crust of salt and pepper. If the bark is scratched with the fingernail or a knife-blade this coating flakes off. The scale insect is then discov-



SIMPLE APPLIANCES FOR THE AMATEUR FARMER WHO IS TRYING TO RID HIS ORCHARDS AND GARDENS OF PESTS.

WHAT TO PRUNE AND HOW TO SPRAY

ered as a plump pale yellow mite underneath. If dead it will be shrivelled and brown, but if alive a speck of color, like blood, is evident. A magnifying glass enables the observer to get a good look at the pest.

The only safe method of killing scale is by dipping or spraying infested trees and bushes with a solution of lime and sulphur, or a miscible oil such as Scalecide. Other serious menaces are the gypsy moth and the brown-tail moth, both of which were originally from abroad and brought in through nursery stock. Their presence is easily discovered. The brown-tail moth will usually be found in the form of a small hairy caterpillar in loose webs or tents two or three inches long. They are conspicuous on any tree and should be removed and burned at once. The gypsy moth lays a mass of eggs which are readily detected in the branches of trees. These must be taken off and burned to rid the tree of danger.

Most orchard pests come under three heads, plant diseases, chewing insects and sucking insects. For each of these a different sort of treatment has been devised, and long experience has proven that most diseases may be checked and eradicated by sprays applied at the proper time.

Among the plant diseases are the black rot of peaches and plums, the peach leaf curl, leaf spots, mildews, cankers and smuts. They are incurable after development. Spraying with a fungicide which will not injure the plant or tree itself will check the fungus in early stages and often right the difficulty. The best fungicide is Bordeaux mixture, although the lime-sulphur wash is also used in very dilute form.

Bordeaux mixture is a combination of bluestone (copper sulphate) and lime with water. Two strengths are used, one for hardy plants such as the potato, apple, pear or quince, and the other for more delicate vegetation like the peach or plum. It can be purchased ready for dilution or it can be made at home.

To make it, take three pounds of bluestone, four pounds of quicklime and fifty gallons of water. Dissolve the lime in a barrel, using part of the water. Heat the water in which the bluestone is dissolved, then pour it into the lime water. Diluted to half strength it is useful for preventing disease on less hardy plants. This spray will not kill insects. To make it effective in

destroying chewing insects arsenate of lead must be added to the diluted formula.

Some plant diseases are due to bacteria, rather than to fungi, and no spray will remedy the trouble. The medicine is pruning. Pear blight, variously called fire, black or twig blight, is such a disease. The black knot of the sour cherry and plum is another. Prune the infected branch well back beyond infection, and burn at once.

Chewing insects, such as the common potato bug, eat plant tissues, and will thus swallow any poisons placed on the leaves. All insects feeding in this way can be killed by the application of arsenical poisons. Chief of these are Paris green and arsenate of lead. They are applied when the plants are in leaf, as the insects are then at work. The codling moth, destructive to apples, the curculios which feed upon peach and plum trees, may be destroyed by spraying with a solution of two to three pounds of arsenate of lead in fifty gallons of water. Or Bordeaux mixture may be used in place of the water for the general health of the plant, because of its fungicidal value.

Sucking insects are those which pierce the bark and then suck the sap, injecting at times a poisonous saliva. They operate like mosquitoes. Among these pests are the scale, plant lice or aphids, and the squash bug. They cannot be killed by arsenical poisons because they do not commence to feed until the proboscis reaches the inner plant tissues. Only contact insecticides will destroy them. In the case of the scale the insecticide must be so strong that it would destroy the tree leaves if it were sprayed at any time but the dormant season. Very dilute lime-sulphur sprays, either home-made or commercial, dilute oil emulsions, strong tobacco decoctions and dilute whale-oil soap solutions are some of the means used to kill plant lice and young sucking insects generally, when the trees are in leaf. Kerosene emulsion is made by boiling half a pound of hard soap in a gallon of water till it dissolves, then removing it from the fire and adding two gallons of kerosene oil, beating vigorously till it becomes buttery. This may be set aside as a stock solution and diluted with seven times its bulk of water when needed for use. It can also be purchased prepared for dilution. One of the best contact insecticides for amateur use is whale-oil soap, one pound in five gallons of water. For cabbage and tomato plants reduce to four

SUCCESSFUL GARDENS

gallons, but for peaches, Japan plums and delicate stuff, increase the water to five gallons.

When brought down to essentials, spraying may be divided into spraying seed fruits and spraying stone fruits. For the former it is necessary to spray while dormant with Scalecide or with strong lime-sulphur, later after the blossoms fall with arsenate of lead in either weak Bordeaux or weak lime-sulphur wash, and two weeks afterward with arsenate in strong Bordeaux. This will ensure good fruit, unless other calamities intervene.

For stone fruits it is also desirable that spraying start with Scalecide, or strong lime-sulphur wash while the trees are dormant. If the trees are healthy and vigorous probably no more spraying will be needed. If peach leaf curl is prevalent, Bordeaux or weak lime-sulphur sprayed just as the leaf-buds open will check its development. But where fruit is liable to injury by brown rot, or ripe rot, spray just after the husks drop with Bordeaux or dilute self-boiled lime-sulphur wash, and again when the fruit is half formed. Arsenate of lead incorporated in each application will effectually destroy the curculio moth and many other nuisances.

A final word regarding the manner of application. For tiny gardens a hand spray or knapsack spray is just the thing. They cost from three to five dollars and will save many times that amount.

For farmers or commercial fruit growers, a large spray pump is indispensable. A good barrel sprayer should work easily and throw a steady, even spray through the nozzle of the hose, instead of spurting the liquid each time the pump is worked. A power sprayer working automatically is best for large orchards. It should have an agitator, a good strainer, and a modern type of nozzle. It is a good plan to use two nozzles on one 25-foot length of hose. An extension rod is extremely handy.

Thoroughness in spraying is the clew to success. The material applied should cover every portion of the tree or plant above ground. Spray in the direction of the wind, not against it. Go over the orchard a second time and retouch thin spots. When spraying trees in leaf be sure the spray is

thrown as a fine mist, not in drops or in a stream. In spraying for codling moth use enough force to drive the mist into the blossom end of the little apples, for it is there the worm lurks, and once the green tips close him in, the rascal is immune.

No man should be discouraged from spraying because his neighbors do not believe in it. Spraying means insurance; insurance of healthy, long-lived, vigorous trees; insurance of well-ripened crops. And the best kind of insurance in profitable returns.

NOTE.—For those who desire to pursue the subject further, Bulletin 178, Office of Experiment Stations, U. S. Department of Agriculture may be procured from the Superintendent of Documents, Washington, D. C., for twenty cents. It is full of valuable information.

CAREFUL PLANTING MEANS SUCCESSFUL GARDENS

S EED catalogues and nursery booklets with their alluring lists of beautiful things lead many gardeners into temptation. Eager to have the best, the surprises, the innovations, amateur gardeners are apt to create meaningless effects in their gardens, because they have not considered the results of careless planting.

Make up your mind, this month, finally, what you want to plant and where you want to plant it. Catalogues and booklets should be thoroughly digested by now, if you have spent a winter with them in pleasant anticipation of the delights seedsmen and plantsmen reveal.

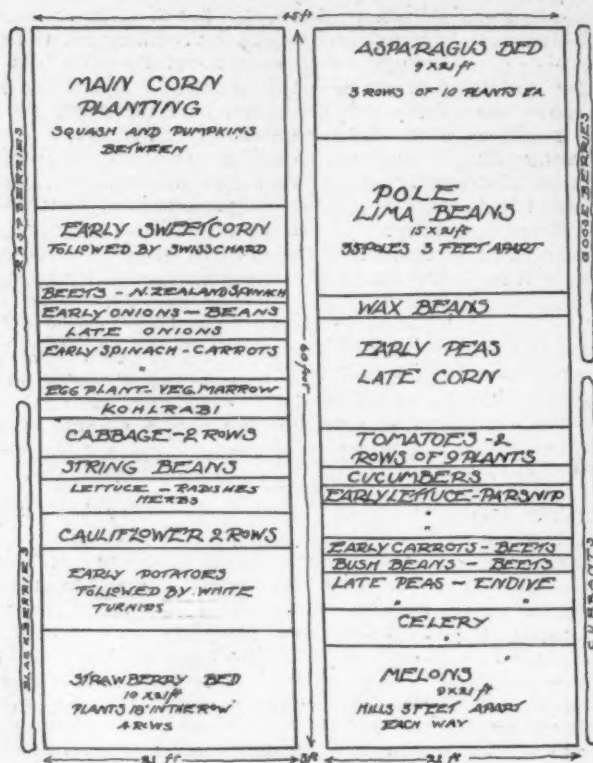
Work out a garden scheme now, on paper, and stick to it. Avoid last-minute reservations. On your garden chart put only those things you want to grow this year,—a pink windflower for the hardy border, that new Michigan beet for the kitchen pot, those shrubs for the lawn,—and when the selection is made, abide by it.

Only by such processes can you achieve a garden which will be useful, economical and beautiful.

Above all else be careful in the planting of shrubs, either on the lawn as specimens, as backgrounds for hardy borders or wherever they may be used. Be careful not only in the selection of their sites but in the way the work is done. Plant them for permanency.

THE LARGEST NUMBER OF THE CRAFTSMAN WILL BE THE APRIL HOME-BUILDER'S NUMBER, BRIMMING WITH INFORMATION FOR THE LAYMAN WHO IS SEEKING TO BUILD A REAL HOME.

PLANNING THE GARDEN ON PAPER



PLAN FOR A CRAFTSMAN VEGETABLE PLOT

PLANNING THE GARDEN ON PAPER

LONG ago March used to begin the year. Not until 713 B. C. did the Romans rearrange the calendar so January and February might open the month sequence. The Anglo-Saxons called March "lenct-monath," the spring-month, and began their rude gardening operations then.

Our gardening should properly begin right after the holidays, by drawing our plans for vegetable patches or flower gardens on paper. The long January and February evenings should see these plans finished, but if they are not done, it is better to make them in March than not at all.

Unless we take thought beforehand, to add a cubit to the length or breadth of our gardens, to plan crop rotations and intercropping systems, to tenant the vacant homes of bulbs with late blooming perennials, to plant a tree where shade is needed,

the garden will not be the place of our dreams, but only a haphazard, messy affair. Nature mocks at half and half, and fills the void with weeds.

First decide on the dimensions for the garden plot, and its site, whether it be for food or floriculture. Then fix a scale to use when the plan in your head is put to paper. Four feet to the inch is ample. Plotting paper, printed in quarter inch squares, can be bought for five cents a sheet, 20 by 24 inches. Pin over this a sheet of tough but transparent tracing paper. The scale lines will show from beneath and guide your eye accurately.

Use a soft drawing pencil to sketch in the outlines of the proposed plan. A quarter inch means a foot outdoors, remember. If vegetables and small fruits are to be cultivated, have the rows run north and south if at all possible, indicate them by dotted lines on the plan, and mark the compass points.

If the garden is shaped or situated so that rows running north and south will be inconvenient, they may run east and west without much difference to most of the garden truck. But pole beans and peas, as well as tomatoes, ought to be planted in rows running north and south, to get the full daily exposure to the sun, which is needed for their maturing.

Rows should be about 18 inches apart for small crops and 2 to 3 feet apart for crops like corn, potatoes or melons. Draw no lines for planting lettuce, parsley, or radishes. These can be planted 'tween rows to save space. If you set aside a 25 foot row for early bush beans, remember to follow this crop with another of entirely different character. A good plan will keep late maturing crops by themselves, separated from those which must be replaced by succession crops. Most seed catalogues inform their readers the length of time necessary for the seed to mature. Plan to keep fruit bushes on the outskirts of small gardens, or else in a well defined location where they need not be disturbed. Here is the plan of a CRAFTSMAN vegetable garden which may

CRAFTSMAN SERVICE FOR HOME-BUILDERS

furnish some suggestions to ambitious souls who would rather grow their own vegetables than buy them. It embodies the Craftsman principles of economy and utility, and simplifies work as well, so that its cultivation shall be a relaxation, not labor. An hour a day will keep it clean and free from weeds, but more time spent in it will repay the maker.

Notice that this plot is only 45 by 60 feet, half the usual size of a tennis court, and that on this small area, less than an eighth of an acre in extent, it is possible to raise enough fruit and vegetables to feed a family of six during the summer, and provide some for winter.

So prolific are many small, well-tended gardens that neighbors have to be enlisted to consume the vegetables. Two dozen tomato plants will under careful cultivation produce so plentifully as to supply a family, their neighbors besides for at least one meal a day and material for catsup and pickles. At present the custom is growing of planting tomatoes in variety, that to this so-called plebeian of the garden may not be added the sting of monotony.

Today the tomato grows in many and diverse forms, its uses being multiplied in proportion. There is the small, red tomato shaped like a pear; the tomato the size of a cherry; tomatoes growing in bunches, like grapes or currants; yellow tomatoes looking like plums and larger ones, white and red like peaches. In these comparatively new varieties the housewife delights, since they are not only food in the abstract, but have a decorative value when used with salads and as garnitures for various dishes. All of these kinds of tomatoes respond readily to cultivation. The neighbors' chickens with their hard bills striking to their very heart and a mammoth green worm, sluggish and without conscience, are their greatest enemies.

Unquestionably the vegetable garden, simple in its layout, can become one of the greatest assets of a country home. The fresh wholesome food that it supplies distributes also a feeling of independence, akin to that of handing the deed of property bought with the results of labor. The man who raises his own vegetables can face the world with a smile. He must, however, beware of the tyranny of such a garden: its demand for constant attention. Let him turn his back upon it, even for a day, and the weeds will have become profuse.

OUR NEW BOOKLET

WE have just published a booklet dealing at some length with the new CRAFTSMAN SERVICE. It is an attractive little book with many illustrations, well printed, and bound in a Craftsman brown cover.

The title of the booklet is "Craftsman Service for Home-Builders."

The first topic discussed is "The Reasons for Craftsman Service," wherein the origin and growth of the Craftsman movement is traced step by step from the designing of the first piece of Craftsman furniture by Gustav Stickley to the present world-wide scope of Craftsman influence in the many questions involved in the building and furnishing of the home. The "Why" of our new service is fully explained and its inevitableness pointed out.

The "Distinguishing Features of the Craftsman House" are next noted clearly and completely. In this article we make no attempt at argument. We merely state our case in the simplest way. We do not quarrel with or criticize other ways of building and other styles of architecture; but we believe firmly that every home-builder would do well to look over this little book before investing in a home. This article is especially well illustrated, the cuts having been chosen with a view of showing the various points we make in regard to Craftsman houses.

"Why We Offer Craftsman Service to You" is the next heading. Whether this service will be found valuable will depend largely upon whether the reader is in sympathy with the preceding article. We explain herein why we are best equipped to help the man who wishes to build in the Craftsman way.

Then follows an article, "The Extent of Craftsman Service," discussing our facilities for supplying plans, the scope of our Real-Estate Service, our Landscape and Agricultural Service, and a fair summary of what we can do for CRAFTSMAN subscribers and why we undertake to do these things.

We wish to distribute this booklet among discriminating home-builders and believe that they will find it interesting reading. If you have a friend or acquaintance who thinks of building this spring send us name and address and we will forward the Booklet without charge.

THE SPRINGTIME OF MEMORY

ALS IK KAN

THE SPRINGTIME OF MEMORY

A GOOD and wise man has said that memory is the great consoler of age—making youth eternal by recalling and vivifying the experiences of youth. As the receptive period of our life passes by, more and more we find ourselves turning to the comfort of that system of multiplying joys known as memory. We forget with our brains and remember with our senses; boundaries and figures learned in youth go down before the increased weight of years; but the sensations experienced in our early days, the smell of wet grass, the fragrance of arbutus borne on March winds, the bloom of crab-apple trees in the twilight—what eternal measure of joy they bring! As memory thus touches our emotions we are children or lovers again with an intensity of happiness scarcely known in the actual days of childhood or realized romance. So through memory one experienced joy swells into a multitude of joys, stirred into life by the cry of a child, the color of a rose petal, the velvet sound of running water over smooth stones.

Happily for this memory of the senses—we do not wait for logic to turn our way or reason to release her stiff grasp. The joys of memory are ours for the having. A sensitive spirit will find them ready to shower blessings on every hand. Indeed age seems to vanish where the sensuous memory stirs to refresh and invigorate us. Memory can do what books fail utterly to accomplish; she leaves us the hero of our sweetest romance. Books exact our appreciation of the virtues (those stilted literary virtues) of others; memory thrills us with the splendid recollection of our own early hopes and our occasional achievements. Memory has but one vital rival in her power to bring swift, safe pleasure, namely, the companionship of very little children who are at once frank and wise, tender and serene.

And to have memory in our old age to call upon when impulse is waning a little and our capacity for material joys lessening we must fill our youthful days with fresh strong beauty. Young life must be full of wonder and romance, storing up impression which through memory will furnish us enlightenment and profit in the years to come.

The days when life is new to us, and so our impressions strongest should necessarily be spent in surroundings that will stimulate the imagination, enlighten the character and infuse the spirit; thus only do we fill our wonder house. Nature should perforce be the background for these receptive days, for Nature holds the illimitable romance of all times. Nature is emotional as youth is, and as years go by we remember through our emotions rather than our intellect. It is indeed the quickening of our imagination in the emotional creative period that gives us a living fineness of joy even after the possibility of material enjoyment is past. In the early days of alert comprehension, swift responsiveness, the body and the soul alike are susceptible to all shades of attack from life. To the young mind glowing with enjoyment, appreciation, enthusiasm, "God is in His temple" merely because the sun is high, and rapture winds rose veils about the eyes of those who would gaze upon love.

It is during the creative years, mental, spiritual and physical, that the emotions are most flexible and the capacity for response most sensitized and whatever vision we possess most awake and eager. Then, what so natural as to fill heart and soul with indelible impressions of beauty from Nature, the foundation of beauty? What are all our metropolitan achievements along artistic lines but reproductions of nature? What is art, music, literature, drama, but a re-presentation of phases of nature that have poured into the heart of man through his vision and out again to the world through his mastery of mediums. Then why not seek the whip for our inspiration and the food for our memory from visions of beauty at first hand? The boy and girl who would enrich memory as a treasure house for age must seek real joys through intimate contact with life, and Nature is indeed the only joy that never fails. But you must know her well when your imagination is young. You must arise as she beckons you from the East in the early morning. You must rejoice and sorrow with her intimately and understandingly, you must sleep peaceful in her divine stillness—or later in life you will seek in vain to find her raptures through memory. Keith, the great painter of the Western oak, says that he learned to know the trees by sleeping under them, and then he painted them from memory.

BOOK REVIEWS

In this feeding of memory we find a vital, if not the most vital, reason that all young life should be lived in the country. There are other reasons, too, for country life in childhood,—health, sympathetic understanding of animal life, knowledge of the importance of manual labor, a sense of responsibility toward progress, respect for strength and simplicity. But valuable as these are as a foundation for a sane, wholesome, useful life, the development of the imagination through country living and nearness to nature and consequent storing of the soul with new, joyous experiences for memory to reproduce in years to come seems the supreme gift that real rural living has to offer our children.

"But I don't want my children to become farmers, James is going to be a great lawyer and Marguerite cannot live without society." This is supposed to be an argument against country life for young folks. As a matter of fact it is only one more in favor of it. If James is going to shut himself up in a law office for the whole of his business life, he more than almost any other needs to enrich his early years with those ineffable experiences that only Nature can give. He far more than the average man will need to draw upon his memory for the joy that in age life will withhold from him. So let James in particular have the opportunity of getting the soil ready to bring forth good gifts. Let him some time in his youth catch a glimpse of a bluebird in March, let him listen to the robin at sunrise of a gleaming April day and above all let him rest at noon with the wide hillsides pale green, all the orchards fragrant and the orioles nesting under his very eyes. James has been cheated indeed if he has not, with rushing feet, brought cherry blossoms to his mother, the first that unfolded from the very branch he had been watching with loving, eager eyes. For with this experience how often, at what disastrous hours the thought of the orchard and the hillside and the branch of blossoms will return to him; perhaps in the crowded courtroom scene or at the day of some bitter failure or in the midst of defeat memory will bring back with her delicate, loving hands those wonderful joys of boyhood when James had the great opportunity of his life to live in the country.

And Marguerite too, will have a much richer life with country days at the beginning of it. What is this society that is

offered her in place of the wildrose in bloom, the fields yellowing with the harvest, the bird calls in her waking moments, her first love borne out of the tender romance of spring, of which she is the living symbol? Can telephone calls and silly school gossip, new fashions in manners and dress, her hair banded low enough on her forehead, her silk stockings cob-webby enough—can these things and their daily discussion really count in her life against intimacy with Nature, a knowledge and love of her wonderful ways, a response to sky, wind, rain, sun, perfume, and in addition a friendship with the kind farm animals, a training for work because it links her with the progress of life, a developed love of peace and a sure, physical poise? What girl in truth has really received her birthright who has not lived happily, vigorously, sanely for a time at least in the country?

We do not advocate too strenuous a life—that every child shall be a pioneer in rural conditions, a life filled with hardship and bleakness—although this is better far than the completely enervated false life of many city and village children; but with all our heart and soul out of the fullness of conviction, borne of experience and observation we say to all parents *give your children country life*, a knowledge at least of springtime in the land of growing, flowering nature, that memory in later life may give them in turn her treasures of exquisitely renewed joys.

BOOK REVIEWS

THE REEF: BY EDITH WHARTON

"THE REEF" is not a strikingly imaginative story, not like "The House of Mirth," wherein Mrs. Wharton knew the value of her material and used it a trifle sensationally, nor does it touch the high art note struck in "Ethan Frome." It is a clever book written from the viewpoint of one knowing life well, regarding it with semi-cynical indulgence; of one past the time of expecting it to unfold with the concentrated energy of the drama.

From beginning to end the story goes on much like life. Agreeable or not its consequences follow each other relentlessly. There is no reprieve from its details; its cup of bitter presented with the draught of love.

Within the souls of its principals there

BOOK REVIEWS

seems to lurk an appreciation of the exalted quality of self-sacrifice; to put which into practise proves, on the test, to be at variance with their own desires.

They are not lovable people; they are not dramatic; rather they are the usual kind mercilessly revealed through the introspection of Mrs. Wharton's pen. For this reason the book, while consecutively reasoned, lacks somewhat in action. It goes on through the rains of Paris and the rains of Givré until the reader longs for bright sunshine, unquestioned and unquestioning love.

Mrs. Leath, a woman of chaste mentality, meets in her early widowhood George Darrow, whom she had loved to the extent of an unfolded nature when a girl in New York; but who had failed to win her because of his passing admiration for a woman lightly touched by scandal.

Left a widow a bit subdued by her mother-in-law; in sympathy with her stepson, Owen of undisciplined morals, and endeavoring to serve her own blithe little girl Effie, it is small wonder that Mrs. Leath met her old sweetheart in London with a smile that gave the impression of "a red rose pinned on her widow's mourning."

But she was a woman given to self-torment, oppressed by the details of life. George Darrow on his way from London to Givré received the word: "Unexpected obstacle. Please do not come till thirtieth." He surmised that she had put him off in the interest of some triviality. Effie had to be found a new governess. Thrown back on himself he falls in with a young woman whom he dimly remembers; one whose remembrance of him is vivid. "My name is Viner—Sophy Viner," she recalls. And his mind reverts to a dreadful sort of lodging house in Chelsea, where, intent on seeking another occupant, he had been prone to pass her on the stairs. The Channel with Paris beyond lay before them.

Some months later at Givré, Darrow, installed as the accepted husband of Mrs. Leath, was asked to give his opinion concerning the little girl's governess. The governess was Sophy Viner, not to remain long in the position however, since the son of the house, Owen, had asked her to marry him.

The end comes with the supposed return of Mrs. Leath to Darrow and the flight of Sophy with Owen, probably without the inconvenience of marriage since he too had learned her story, to Spain, to India, or

wherever their overstrained emotions led them.

Here somewhere between the earth and the sky "The Reef" leaves its readers suspended, quite after the fashion of Henry James. Again it reminds us of life. It cuts us off in the midst of things, throwing us, against our will, back on our own surmises. (Published by D. Appleton & Company, New York. 376 pages. Price \$1.30 net.)

SATURDAY IN MY GARDEN: BY H. HADFIELD FARTHING

NATURE books unlike those of fiction have a certain perennial interest accentuated with the return of each spring. It is so with "Saturday in My Garden," a book which inspires the reader with the desire to cultivate the soil even though his space is limited to a quarter of an acre and the time for its attention restricted to Saturdays. The book is a reproduction of articles which appeared in the *Daily Express* meeting with speedy appreciation. Much material, however, has been added to the original articles and the book systematized so that its information is readily obtainable.

It is offered exclusively as a help and guidance to amateurs, making no pretence to gain the attention of experts. Its suggested cultivation of plants nevertheless is about identical with that generally practised, whether in large or small gardens.

"Saturday in My Garden" does not deal alone with flower growing. It teaches how to make and to preserve a lawn, also how to select fruits and vegetables for the small garden. It devotes a chapter to the amateur's greenhouse and provides a chronological table at the back of the book indicating the work that should be done each day in the year. Happy is he who has more time to spend in his garden than a single weekly Saturday. (Published by Doubleday, Page & Company, New York. Illustrated. 476 pages. Price \$2.50 net.)

TREES IN WINTER: BY ALBERT FRANCIS BLAKESLEE AND CHESTER DEACON JARVIS

THE title of this book as explained by its authors does not, as might seem likely to those unacquainted with the habits of trees, limit them to the regulation winter months of December, January and

BOOK REVIEWS

February. It covers rather the time of tree-life from the shedding of their leaves in the autumn to the bursting of their buds in the spring, a period differing greatly with various species. In some cases it may include the months between March and November.

The arrangement of the book places its subject matter well. In fact it is one of the first publications to give to the public able assistance in the identification of trees during their leafless period; even though it is at this time that lumbering and the commercial handling of trees is mostly done. The trees included for description are those of the northeastern part of North America, New England being the pivotal region.

Botanical specialists as well as students of tree diseases will find an added means of their identification by use of the book, although its primary purpose is to assist in tree-study out-of-doors. A pleasant part of the book is that which assists its readers to recognize trees at a distance by their general habit of growth and their bark. In this connection some of their photographs are highly interesting. Enthusiasm is aroused through the views presented and the mind is enlivened with a desire to come into a fuller sympathy with trees not only as natural objects of beauty, but also as art works in the landscape.

The tree, its propagation, planting, selection, care and protection from injuries and diseases—the tree in its utilitarian aspects is thoroughly discussed in this book which recognizes the beauty of the tree more as a by-product than as the impelling object of study.

For those who have to do with trees from no matter what point of view, planting them on the lawn or selecting them in the forest it would seem that "Trees in Winter" should rank among essentials. In every way it is an example of comprehensive information placed systematically at the service of the reader. (Published by the Macmillan Company, New York. Illustrated. 446 pages. Price \$2.00 net.)

THE OLD GARDENS OF ITALY: BY MRS. AUBREY LE BLOND

TO aid the traveler to find Italian gardens of interest and to provide some idea of the way to go about gaining permission to view them is the individual theme of Mrs. Le Blond's book.

That the old gardens of Italy owe and retain their character after, in some instances, generations of neglect, to their entire suitability to the home, its occupants and the surrounding climate is now a recognized fact, while the idea of copying them literally on American soil has begun to pall on intelligent people. But the great lesson they teach that the house and garden should be treated as a whole cannot be too strongly reiterated.

In Italy the term "villa" means the whole property. The Italians used few flowers other than roses in their gardens, simply because the heat of their summer suns forbade them to flourish. Box, cypress and holly formed their substitutes. Inevitably the Italian garden is a place in which to live; its walks for cool days so planned as to trap the sun and its grottoes for sunlit weather dripping with moisture.

The plan of the book is good on account of the directness with which the subject is treated. There are no elaborate descriptions of villas; but in each case their essential and peculiar features are mentioned. Few words are used. The book is an excellent hand book for those who wish to know what villas to visit, likewise which ones to avoid. Its scope is wide and the pleasure it gives the reader, greatly heightened by the numerous illustrations. (Published by John Lane Company, London and New York. Illustrated. 173 pages. Price \$2.50 net.)

GARDEN FLOWERS IN COLOR

THIS series of small books dealing with various kinds and types of flowers each one written by an author familiar with the respective subject, includes a number of hand books useful to those wishing to specialize in some particular phase of flower-growing.

Tulips: By Reverend Joseph Jacob is held to be "a practical manual of tulip-culture," emphasizing much that is interesting about the historical, scientific and literary discussions that have gathered during past generations about this fair Eastern flower.

Irises: By W. Rickalson Dykes inspires its readers with the desire to pursue iris-culture, since it offers the able assistance in this field of garden work that has formerly been somewhat difficult to obtain in concise and pleasing form. The iris is brought forward as a genus of plants of

BOOK REVIEWS

which some member can be had in bloom each month in the year. This fact alone should give the unusual forms a more general place in the gardens of rarity-seekers.

Chrysanthemums: By Thomas Stevenson with chapters by C. Harman Payne and Charles E. Shea makes a plea for the retention of the chrysanthemum as the great decorative flower of the plant world, one that has been carefully cultivated and systematically improved for over 2,000 years. Indeed, the Japanese began to hold their famous chrysanthemum shows in the year 900 A. D. The chrysanthemum as a flower of the autumn and an exhibition plant is fully treated. Its history, to which a chapter is devoted, is interesting and the cultural instructions are simple and well-stated.

Annuals—Hardy and Half-Hardy: By Charles H. Curtis gives in limited space a wealth of information concerning this class of important garden plants. Those of the greatest value are presented, while others regarded by the author as less desirable in the garden are grouped together in a separate chapter. The selection and cultivation of annuals are carefully directed.

Each one of the books in this series holds eight plates in color of prominent flowers. Many of them are exceedingly attractive, the various tones being more faithful representations of the blooms as they actually occur than is frequently the case in similar works. (Published by Frederick A. Stokes Company, New York. Illustrated. Pages about 110 each. Price 65 cents each, net.)

POPULAR GARDEN FLOWERS: BY WALTER P. WRIGHT

THE strong plea made by the author of "Popular Garden Flowers" is for fewer flowers in each garden and for those of renowned virtue which have been carefully developed and tested over a long period of time. Indeed in taking this position rests the note of newness of the book, since the greater number of both books and gardens represent today so many varieties of flowers as to be fairly bewildering to those caring for garden simplicity.

In the present volume, issued to complete the trilogy of which the other two volumes are "The Perfect Garden" and "The Garden Week by Week," the most important plants are introduced to the reader, not superficially but through a relation of the number and meaning of their names, their origin and history, their position in

literature and folklore, their entrance into the garden and the best varieties that can there be propagated.

Cultural items are dealt with in detail, while at the same time much information concerning the personality of the plants is given. Such flowers as roses, chrysanthemums and carnations, having a recognized life in the greenhouse as well as in the garden, are treated in connection with their indoor habits, exhibitors being offered guidance through the discussion. The colored illustrations of gardens scattered through the book show several particularly attractive arrangements of flowers. (Published by Doubleday, Page & Company, New York. Illustrated. 376 pages. Price \$2.50 net.)

DYES AND DYEING: BY CHARLES E. PELLEW

IN his book entitled "Dyes and Dyeing," Mr. Pellew extends to intelligent craftsmen the pleasure of comprehending and undoubtedly of practising one of the most interesting arts. For the book is not for the professional dyer who conducts work on a large scale in the factory and to give instructions to whom would be like carrying coal to Newcastle; but rather it is for craftsmen and amateur dyers who wish to stain textiles upon a somewhat small scale.

To obtain authentic information on this subject has been for the latter class of individuals a difficult matter, that is, until Mr. Pellew became aware of their need and aided by knowledge gained during his service as Adjunct Professor of Chemistry at Columbia University and later by personal experiments, gave to the public the series of articles which were published in *THE CRAFTSMAN*. The present volume is an outcome of these articles.

Mr. Pellew leaves no doubt as to the fact that the specialized art of dyeing has very distinctly advanced since the days of the ancients and that the present time shows it in a higher degree of development than ever before. The historical incidents that he relates are interesting, especially when viewed in retrospect from the dawn of the new era in dyeing—marked by the discovery of Mauveine in 1856 by Sir William Henry Perkin. From this discovery the modern aniline dye-stuffs followed as a natural sequel.

The outfit suggested for home dyeing is

BOOK REVIEWS

simple, far from costly; the instructions and recipes given are clear and to the point; a classification of coal tar colors available for craftsmen should prove helpful, also the list of selected dyes.

Directions for dyeing raffia, silk, wool, cotton and linen, feathers and leather, are entered into in detail. The scope of the book is ambitious, moreover satisfying. Not only does it run the full gamut of instructions concerning the changing of colors; but it devotes several chapters to the ancient and modern methods by which craftsmen can apply dye-stuffs so as to produce definite patterns on the objects dyed.

Tied and dyed work is described; stencils and stencil work, and enough about batik (the Japanese word signifying painting in wax) is written to arouse thoroughly the enthusiasm of the reader. Batik in fact is a process practised in the East for many generations and only recently experimented with by English and American craftsmen.

It is without doubt that Mr. Pellaw's researches will be a ready assistance to those wishing to gain color effect in home decoration, for fancy costumes, for wearing apparel and for materials useful in various arts and crafts. Teachers will be glad of the book as an assistance in educating children to a sense of color, its many shades and differences. (Published by McBride, Nast & Company, New York. Illustrated. 264 pages. Price \$2.00 net.)

INDUSTRIAL MATHEMATICS: BY HORACE WILLMER MARSH

FOR those who have need to use mathematics in the various industries which they serve this book, an outcome of Mr. Marsh's experience as head of the Department of Mathematics, Pratt Institute, Brooklyn, fairly teems with information and facts needful to know. Its appeal is to those "who desire mathematical preparation for technical courses, who are taking industrial courses of study; for those who are employed or who anticipate employment in technical industries."

Many examples and problems are provided through its pages, actual commercial data being used to give them expression. The master mechanic will find in the text the mathematics useful to him, while it will also furnish many with the ability to read

technical periodicals regarding various industries in which for one reason or another they find interest. (Published by John Wiley & Sons, New York. Illustrated. 477 pages. Price \$2.00 net.)

PHOTOGRAPHIC HISTORY OF THE CIVIL WAR: BY FRANCIS TREWELYN MILLER, EDITOR-IN-CHIEF: IN TEN VOLUMES

THE Civil War, its meaning, its facts, its history, its romance and its poetry are fully told in these ten volumes of photographs appealing to the eye of the reader as well as to his intelligence. Thousands of scenes enacted between the years 1861-1865 are herein reproduced through photographs; while the text under each one is written by some special authority. The work accentuates the re-establishment of sympathy and confidence between the North and the South, and the fact that being now wholly one people in a great country, the time is ripe to treat this heroic period of history from the standpoint of what it teaches of literary significance and of reconstruction. (Published by the Review of Reviews Company, New York. Illustrated. 350 pages each volume. Cloth Edition, price \$34.00.)

ILLUSTRATIONS OF DESIGN: BY LOCKWOOD DE FOREST

FIFTY plates illustrating the lines used by the craftsmen of India make up Mr. de Forest's book. A student of Oriental art for the last 35 years and in close touch with the workmen of India and Damascus, he has learned much concerning the way in which they work and about their wonderful facility in making designs, an art almost lost to the Western world.

Through observation of the Mistri caste of India, Mr. de Forest has come to believe that design is "a language of form taken in through the eye to the mind, just as music is taken in through the ear." One must learn the notes of line and color before being able to compose, otherwise to design.

The plates of the book, many of which are very beautiful, should prove suggestive to those wishing to design in almost any material ranging from stone to wall decoration, even to jewelry. (Published by Ginn & Company, New York. Plates 50. Price \$2.00 net.)

NOTES OF GENERAL INTEREST

NOTES OF GENERAL INTEREST

AT THE FOLSOM GALLERIES

THE fat woman is irresistible. She is so softly, unguardedly fat, she seems to follow herself with a certain swaying defiance, her clothes tight as only a fat woman ever wears tight clothes, strained about her, dangerously taut, an embodiment of every defect the fashion of the moment is capable of. But her tight ungracefulness is worn with pride, a curious sturdy acceptance of Fate's injustice.

A child walks swiftly past her, incurious of her unbeautiful exterior, not a school-girl, though young. You can see at a glance that her education has been life, not books, and that life has also given her a cheerful independence and an impertinent sureness. She is also "stylish," hideously so, lean to emaciation, her few garments a complete revelation of this leanness. Her hat, the largest to be found, with a feather in length to grace the court of Henry the Eighth, not an unbecoming hat but startlingly unreal. Her little skirt as meager



"THE APPRENTICE FROM MADISON AVENUE."



"FIFTH AVENUE GOSSIPS."

as the hat immense, as though all her trifling money had been expended in the millinery bargain.

Regarding the child with amusement not unmixed with contempt are three young girls arm in arm, the latest fashion accent in every detail of their self-conscious garments. In fact, quite willingly and purposely all of the lines and curves and eccentricities that make for fashion are exaggerated in their pose and garment. They are sprightly, satisfied caricatures of the modern girl whose means enable her to express the mode of the day without artistic conception or grace in execution. But these three young women carry their accented clothes with the same obvious content that the fat woman bears her straining harness and the young girl her royal head adornment. There is eager interest in each face, a purely material interest; but keen with the curiosity of undeveloped life about physical things.

A shade less satisfied, and many shades more elaborate as a caricature, is a tall woman with a corsage bouquet and a muff drooping at the side—the picturesque carried consciously to the nth degree, carried beyond all beauty, beyond all understand-

NOTES OF GENERAL INTEREST

ing, born in the mind that only knows quantity and that feels that *more* must inevitably mean better. So absorbed is she in the contemplation of her perfection of eccentricity that she has no sympathy for the fat woman or interest in the little girl and does not heed the amusement she gives the three gossips whose smiles are not unmixed with envy.

The fifth figure is the aged ingénue type; she abounds in England, you cannot walk a block on a London street without passing her. Her dress is young and short, with senile coquetry in every line, the hat large and garden-like, the face cruel, seamed and hardened with rapacious, envious thoughts. She glares at the others and they do not smile at her, for they are a little fearful lest she turn and rend them.

Others there are young and old, in this little community at the Folsom Gallery, all real human types to be seen any evening on upper Broadway, indeed on almost any wide avenue in the theater region of New York. These particular types which we are speaking of and showing in this article have been reproduced with consummate skill and rare human sympathy in the por-



"FIFTH AVENUE GIRL."



"MISS BROADWAY."

trait-studies by Ethel Myers, miniature pieces of sculpture holding mighty satire on the more or less undeveloped feminine humanity, the by-product of a huge, heartless city. In no instance has Mrs. Myers (who by the way is the wife of the painter of Eastside children, Jerome Myers, an artist of keen insight and skilled technique) given us intentional caricatures. She is not revealing in these studies her point of view about these people, their aims and ambitions; but in the most subtle, yet simple fashion, their own point of view about themselves. You do not look at them with pity and say, poor, grotesque humanity, what can be done for them? As you study them, you know that they are quite satisfied. They are dressing in a way that satisfies their taste completely, where they exaggerate they think themselves finer, more interesting. Clothes to them become almost the sum total of human achievement, and they must be clothes that bring them the tribute of astonishment in the eyes of the

NOTES OF GENERAL INTEREST

passerby. Quality they cannot have. They are hardly conscious of it. Size and quantity hence become their standards. They may pass through this phase to a finer understanding of the relation of clothes to the human mind and body, or they may continue their life long to exaggerate with self-satisfaction, but for the time being at least their enjoyment of life is as great or greater than yours or mine. They do not envy simplicity, but are scornful of it. Their enjoyment of life is flamboyant and their expression of it showy and tawdry.

In the past Mrs. Myers has been better known to the artist world as a painter of courage and skill, for the future she must rank, whether she will or no, as a sculptor with the power of presenting through her work a knowledge of life and understanding of human psychology as rare as it is interesting.

SOME OF THE BEST RECENT EXHIBITIONS

WE regret having to go to press with only the briefest notice of a number of noteworthy exhibitions at the various New York galleries. We have held so closely to the idea of a garden number in this March issue in answer to requests from all over the country for our help along these lines that our space has been completely taken up in the more practical fields of Craftsman endeavor. We feel, however, that it is only due our readers to append here a list of artists who appeared before the New York public in more than usually satisfactory exhibitions:

At the Metropolitan Museum of Art, the great Morgan collection of paintings. At the Knoedler Galleries, the paintings of George Elmer Browne. At the MacDowell Club of New York, an exhibition of paintings and sculpture including the work of Robert Henri, George Bellows, Randall Davey and Jonas Lie. At the Numismatic Society, an exhibition of medals, plaques and drawings by Signor Cariat. At the Macbeth Gallery, an exhibition of the widest interest under the head of the "Paintings of the Far West." Some of William Ritschel's work was shown, which our readers will remember in an article on South-western art. In the Montross Gallery one of the most interesting events of the season has been an exhibition of early Chinese art from the collection of Mr. A. W. Bahr. Durand-Ruel has had a rare collection of

Claude Monets which they grouped under the head of "Views of Venice." The Macbeth Gallery presented a collection of Charles Hawthorne's works. At the National Arts Club there have been a series of exhibitions, the most interesting work shown being that of the painter, sculptor and architect members. Interesting sculpture was shown by Ernest Wise Keyser at the Folsom Galleries, and the Pen and Brush has had an exceptionally interesting exhibition of arts and crafts. The Seventh Annual Exhibition of the Books of the Year had its usual place in the National Arts Club Galleries and was more than usually interesting. Perhaps one of the most startling exhibitions was that given by Alfred H. Maurer at the Folsom Galleries. Paintings that were revolutionary to a degree both in subject and color, interesting to the initiated but bewildering to the lay reader and confusing at close range to any one whose eyes do not work like reversed opera glasses. Frederick Keppel & Co. have shown some exceptionally good engraved portraits. One of the most interesting and vital exhibitions of the year was Paul Dougherty's paintings at the Macbeth Gallery. This we hope to review at length later.

AN ART EVENT

THE art event of the season in New York so far is unquestionably the opening, February 17, of the International Exhibition of Modern Art, in which the most vivid and original modern art was shown both from Europe and America. The morning papers characterize this exhibition as little short of sensational. Over 3,000 people were present, thronging through room after room of the great Armory on Lexington Avenue.

The Association of American Painters and Sculptors, which brought together this extraordinary exhibition, is less than a year old and really has worked a miracle in getting together such a collection, in hanging the pictures in so short a time with such skill and judgment. Practically all the modern men of Europe whose names are linked with progress or revolution are present in this collection, not with one, but many canvases; so that one sees Cézanne not only at his best or his most unusual, but through various stages of his development. The same is true of Matisse and the revolutionists of a generation ago.

DISTINGUISHING FEATURES OF CRAFTSMAN HOUSES

DISTINGUISHING FEATURES OF THE CRAFTSMAN HOUSE

THE RULING PRINCIPLE OF THE CRAFTSMAN HOUSE IS SIMPLICITY.

THE central thought in all Craftsman activities is the simplification of life and a return to true democracy. Accordingly the exterior lines of the Craftsman house are very simple and its interior divisions are few.

SIMPLICITY SPELLS ECONOMY.

Elaborate ornamentation is eliminated by our method of interior treatment. Post-and-panel construction replaces useless partitions. Native woods are used liberally. The fireplace is made an ornamental feature. These and other methods are employed in the Craftsman plan to give at a reasonable cost proper decorative effects. The principles of cleanliness and sanitation are recognized in such a way as to make for economy, but possibly the greatest economy of all is the permanent quality of the homes we design. A Craftsman house should stand for 100 years or more without requiring repairs; in fact, for many years a Craftsman house will increase in value and beauty without impairment, and use will give to it a softness and friendliness which will constantly add to its charm.

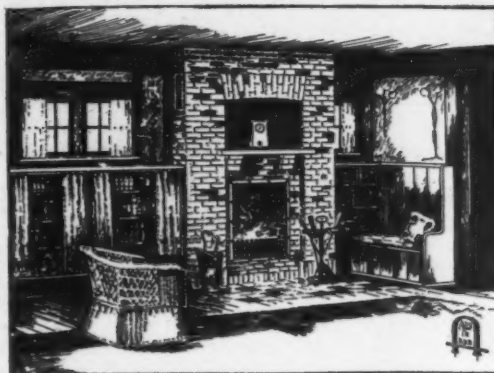
THE SIMPLE LINES OF THE CRAFTSMAN HOUSE GIVE IT A BEAUTY AND A DIGNITY WHICH REACT MOST FAVORABLY UPON THE LIFE AND CHARACTER OF THE FAMILY.

Growing children reflect their environment. Home-builders who are influenced by the notions of others and who strive to outdo their neighbors in building their

home, instil the same spirit into their children, and a home which is the product of weak imitation or freakish straining after originality, cannot have a wholesome effect on its inmates.

A CRAFTSMAN HOUSE ANSWERS THE QUESTION—"WHAT ARE THE NEEDS OF THE FAMILY?"

Too large a house with unused rooms breeds a spirit of extravagance. The relation of every part of the interior of a house to the needs of the family should be direct and apparent. A Craftsman house is designed to meet these needs just as simply, comfortably and economically as possible.



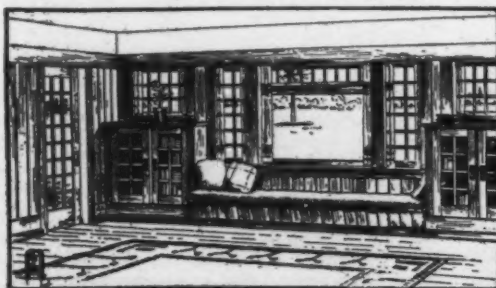
CRAFTSMAN FIREPLACE CORNER WITH BUILT-IN SEAT AND BOOKSHELVES.

A CRAFTSMAN HOUSE REPRESENTS NOT ONLY ECONOMY IN COST BUT ECONOMY IN FLOOR SPACE.

Not an inch of space is wasted. Because of this the owner's money is made to go as far as possible, and a small house, properly designed, is generally sufficient for the ordinary family. The general living rooms are thrown together, usually including the entrance hall and stairway, so that the whole lower floor of a Craftsman house has the effect of a great living room. Post-and-panel construction and the arrangement of pleasant nooks and corners give a sense of room division as well as a feeling of semi-privacy.

BUILT-IN FEATURES ARE OFTEN INCORPORATED TO MEET SPECIAL NEEDS.

Like other structural features, built-in fittings add to the interest and beauty of rooms. They are directly related to the life of the household and make for simplicity and comfort.



BUILT-IN WINDOW-SEAT AND BOOKCASES IN A CRAFTSMAN LIVING ROOM, SHOWING THE DECORATIVE EFFECT OBTAINED BY STRUCTURAL FEATURES.

DISTINGUISHING FEATURES OF CRAFTSMAN HOUSES

A DISTINCTIVE NOTE OF THE TRUE CRAFTSMAN INTERIOR IS THE FIREPLACE.

We advocate the fireplace not only for the purposes of affording warmth, light and ventilation, but also as a decorative feature that will add to the interest of the whole interior.

DECORATION IS ACCOMPLISHED BY PROPER USE OF STRUCTURAL FEATURES.

A Craftsman interior, with its built-in features, its cosy nooks, its fireplace and friendly atmosphere created by absence of separate rooms and overcrowded furnishings, affords real decoration without additional expense.

CRAFTSMAN DINING ROOMS ARE ARRANGED TO SIMPLIFY HOUSEHOLD MACHINERY.

The dining room is usually designed to be either almost or wholly a part of the living room. We believe this arrangement to be a constant expression of the spirit of hospitality—entertainment grows thus less elaborate and more friendly, and this phase of home life becomes less formal.

THE CRAFTSMAN KITCHEN IS DESIGNED TO PROVIDE FOR THE HOUSEWIFE EVERY KIND OF CONVENIENCE AND COMFORT.

The drudgery of housekeeping is largely due to cluttered kitchens and inconvenient arrangements. We believe in plenty of shelves and cupboards, open plumbing, the hooded range; in short, an equipment which will make the housewife independent of the maid.

CRAFTSMAN BEDROOMS ARE SIMPLY FURNISHED, AS INDIVIDUAL RETREATS.

Nothing lays such a burden upon the shoulders of a housekeeper as large, elaborate and over-dainty bedrooms. Here, as elsewhere, we lay chief stress upon the natural beauty of the walls and woodwork, and the bedrooms of a Craftsman house reflect the idea of durability and cleanliness.

CRAFTSMAN INTERIOR DECORATION IS BROUGHT ABOUT BY THE PROPER USE OF WOODS AND HARMONIOUS COLOR SCHEMES.

The common impression that the lavish use of woodwork is a luxury is erroneous.



CRAFTSMAN SHINGLED BUNGALOW WITH OPEN SLEEPING ROOMS ABOVE: NO. 109.

Beamed ceilings, built-in furnishings and wainscoting amply decorate the most commonplace interior. Gustav Stickley is perhaps the leading authority on the proper use of our native woods and their treatment for decorative purposes. All Craftsman color schemes are based on soft wood tones and are in themselves distinctive.

CRAFTSMAN EXTERIOR CONSTRUCTION IS SUCH AS TO EFFECT A COMPLETE HARMONY BETWEEN THE HOUSE AND ITS SURROUNDINGS.

We like especially to link the house as closely as possible with the ground on which it stands. We do not advise the leveling of a lot to provide for a smooth, neatly squared spot for the house to stand on—we accommodate the house to the site. In suggesting the materials for the walls we are guided, in deciding what tone should be given, by the general color effects of the landscape—warm, creamy tones for one locality, and perhaps a dull green pigment or the gray of natural plaster in another section of the country. In every detail the Craftsman house is an harmonious unit with its environment.

THE CRAFTSMAN HOUSE ALWAYS COMMANDS A MARKET PRICE FAR IN EXCESS OF THE ORDINARY DWELLING.

This is due largely to the fact that the Craftsman house is designed for permanency. It is built to endure for years without any expenditure for repairs. When constructed in the Craftsman way, a house is adequately protected from the weather, is built upon a secure foundation of the best materials, and will stand for years after ordinary dwellings in the neighborhood have passed into the scrap heap. Another reason for the high market value of the Craftsman house is that so many homes

THE SCOPE OF CRAFTSMAN SERVICE

have been built from our plans and our home-building work has become so generally recognized that the word "Craftsman" is a hall mark of quality and will add several hundred dollars to the value of any house.

The question of market value is of extreme importance to the house-builder himself from the standpoint of the security of his investment, as well as the ease with which a loan on the property may be secured.

THE VALUE OF CRAFTSMAN SERVICE

MOST persons build only once in a lifetime, and the house when completed must be lived in, whatever may be its imperfections. A man's home generally represents the savings of years, and may anticipate the savings of years to come. Hence, the building of the



INEXPENSIVE SUMMER BUNGALOW OF CEMENT:
NO. 80.

home is not to be undertaken lightly, and no one is entitled to the confidence of the home-builder in assisting and advising in such a problem, unless there are adequate grounds for such confidence.

For this reason we want our subscribers to know exactly what our qualifications are for rendering such services.

In the first place, we have designed in our Architectural Department and published in THE CRAFTSMAN Magazine over 150 houses, ranging in cost of construction from \$900 to \$30,000.

The number of homes built on Craftsman lines, after Mr. Stickley's plans, runs into the thousands each year. Over twenty million dollars' worth of Craftsman homes were built last year alone, in all parts of the world, from Alaska to the Fiji Islands, thus attesting to the popularity and adaptability of this style of architecture.

To most people, however, the factor which gives them the greatest confidence

in our organization is the thoroughness and sincerity for which the word "Craftsman" has become a synonym.

With this background of practical experience to draw from, and this reputation for good workmanship to uphold, the Craftsman organization comes to you, a prospective home-builder, proposing a relationship of principal and client. This proposal is made with a full understanding of the importance of the problem here discussed.

The scope of our architectural activity must necessarily be somewhat limited, for naturally no home-builder who does not endorse the principles which have been outlined here would wish our aid. On the other hand, for those who *do* believe with us, we alone are qualified to give satisfactory service. Mr. Stickley is the originator and designer of Craftsman houses, and therefore the natural source of information and assistance for people who wish to build Craftsman houses is *right here*. It is as necessary to come to us for a Craftsman house as for a piece of Craftsman furniture. There are plenty of imitations and plenty of other styles, but no other place to obtain a single piece of furniture having the real Craftsman lines, the real Craftsman finish and bearing our shop mark. The same is true of Craftsman houses.

CRAFTSMAN LANDSCAPE AND AGRICULTURAL SERVICE

THE planting and laying-out of grounds is an important matter. A tree is not planted for the day, but for succeeding generations. It indicates, to a great extent, the character and judgment of the one who plants it. Of equal importance is the proper planting of flowers and shrubs.

Realizing the great need for care in these matters, especially in the case of Craftsman homes, where house and grounds are meant to be an harmonious unit, a new department of Landscape Service has been organized as a branch of Craftsman Service. Questions about planting, gardening, landscape work, the protection of wild flowers and the conservation of other native flora, will be answered with care.

Pictures and descriptions of gardens made by CRAFTSMAN subscribers will also be published in the magazine.

CRAFTSMAN SERVICE RECEPTION ROOM

RECEPTION ROOM OF THE CRAFTSMAN SERVICE, 41 WEST 34TH STREET, NEW YORK

DIAGONALLY opposite the Waldorf in the heart of the shopping and business section of the city, THE CRAFTSMAN has established its headquarters, aiming by this means to provide its subscribers freely with information and to consult with them about their house-building problems.

Visitors from the suburbs, the Middle States and the Far West, visitors from Bermuda, the East, the North and the South will here be welcomed by experienced men, ready to answer their questions and to discuss with them whatever plans they may have in mind concerning their realty, their homes, their gardens and their farms. Here at headquarters subscribers to this magazine will find a room fitted up as a model Craftsman living room; its chairs and lounges comfortable,

its writing desk well equipped, its air that of solidity and home comfort.

The shelves of this room hold many books relating to house-building and decoration; designs and plans of various Craftsman houses are exposed; while booklets descriptive of necessary products can be had for the asking. Samples of roofing, grating, brick-laying, lighting fixtures, ventilators, fireirons and candlesticks can also be seen. The treatment of floors and the use



SIDE VIEW OF CRAFTSMAN RECEPTION ROOM.

of American potteries are also embodied in this model reception room of friendly and helpful purpose.



VIEW OF ONE END OF CRAFTSMAN RECEPTION ROOM.

Examples of wood finished in different shades of Craftsman Lustre, here assist the house-builder to select some style pleasing to his individual taste, thereby avoiding the disappointments inevitably the result of hasty decisions. Real Craftsman Fireplaces, moreover, are features of this reception room.

Nor is it without well chosen plants that give it the Craftsman touch of intimacy with the out-of-door world.

Index to Vol. XXIII of The Craftsman

TOPIC INDEX

- Academy, The Fall, in Detail—By M. F. Robinson: Pictures sadly crowded; The sculpture gallery; The prize pictures, 559.
- Akin, Louis, Painter: In Memory: Recent death of Louis Akin; A painter of vision; His pictures of the Southwest; A tribute, 676.
- Alfalfa, Planting, Experimental Tests in, 94.
- Als ik Kan—By the Editor: A School for Citizenship, 119. "Call of the Carpenter, The," 122. Thanksgiving and Politics, 245. Christmas and THE CRAFTSMAN: Christmas fraught with tender feeling for all genuine people; THE CRAFTSMAN'S Christmas message to its readers; Its purpose to open American eyes to the possibilities of American achievement, 361. What the People's Verdict Really Means; A declaration that the sentiment of this country is progressive; A moral mandate which the Democratic party may not ignore; Crushing repudiation of the Republican party, 362. "Borrowed Plumes": Lecture by Dr. Simon N. Patton on Clothes for young working girls; The working girl's duty to her family and herself; Stylish dressing as compared with good and beautiful dressing; The unwise teachings of this famous man of letters, 487. "Standing Up to be Counted": The political situation, 599. The Springtime of Memory: Memory the great consoler of age; Joys of memory ours for the having; Joys of youth stored up for memories in old age, 718.
- Ancestor, An Unsuspected: A quaint volume "THE CRAFTSMAN—By Caleb D'Anvers, of Gray's-Inn, Esq."; Published in London in 1731; Property of Mr. Max E. Schmidt, 249.
- Angelus, The: A Poem—By Edward Wilbur Mason, 322.
- Antidotes—By Marguerite O. B. Wilkin-son, 675.
- Architecture, Craftsman: Homes for the people, 577.
- Architecture and Furnishings, The Quality of Fitness in—By C. F. A. Voysey: The attitude of the architect toward his client; A building should look as if it grew where it stood; Many elaborations in architecture are useless; A nation produces the architecture it deserves; The first condition of true art must be truth in every part, 174.
- Art, Scandinavian, and Its National Significance—by Henry Reuterdaahl: Mr. Reuterdaahl, president of the American Scandinavian Society, tells of the art of his native country; Art of the north shows violent contrasts; The artists of Norway and Sweden live the life they paint; The exhibition of Swedish art in America; The important canvases, 282.
- Art, The Wargod's: Can Modern Art in Germany Survive the Commercializing Impulse of the Nation's Ruler? Germany's eminence wholly commercial; Exhibition of German graphic arts at the Berlin Photographic galleries; An exhibition of technique rather than inspiration; What pen and pencil are saying about Germany, 501.
- Bells of History and Romance: With Pictures from Frank A. Miller's Vast Collection of Bells at Riverside, California—By Eloise Roorbach: Bells of history and their message; Mr. Frank A. Miller's collection of three hundred bells at Riverside, California; The Garden of Bells at the Inn of Bells, 255.
- Bermuda: The Land of Two Springtimes—By Hanna Rion: Three great flower festivals in Bermuda; A fairy land of flowers, 670.
- Birds on the Farm, The Value of, 233.
- Bird Sanctuaries, The Great Value of—By T. Gilbert Pearson: Game preserves of Mr. E. I. McIlhenny; Protection of birds through the efforts of Mr. McIlhenny, Mr. Charles Ward, Mrs. Russell Sage and Mr. Henry Ford; Bird sanctuaries inaugurated by the Federal Government; Work of the Audubon Societies, 311.
- Birds, The Economic Value of: They Could Save Us Three Hundred Million a Year—By T. Gilbert Pearson, 432.
- Birds, Will Congress Help the?, 352.
- Boberg, Anna: The Sea Painter of the North—by Hanna Astrup Larsen: A

TOPIC INDEX

- dweller in the Lofoten Islands whose art has taken deep root in the heart of common humanity; Anna Boberg's life among the fisher folk of the North; The pictures she has painted; A painter of rare sincerity, 439.
- Bobolinks and Army Worms, 341.
- Book Reviews: "The Story of Gösta Berling": Translated from the Swedish of Selma Lagerlöf by Pauline Bancroft Flach; "The Golden Spears"—By Edmund Leamy; "Replanning Small Cities"—By John Nolen; "Modern Cottage Architecture": Illustrated from Works of Well-Known Architects, Selected and Described by Maurice B. Adams, F. R. I. B. A.; "Country Cottages and Week-End Homes"—By J. H. Elder-Duncan, 125. "Lifted Masks": Stories by Susan Glasspell; "Fresh Air and How to Use it"—By Thomas S. Carrington, M. D.; "Wood and Forest"—By William Noyes; "Social Life in the Insect World"—By J. H. Fabre: Translated from the French by Bernard Miall; "Lame and Lovely"—By Frank Crane; "Love in A Mask"—By Honore de Balzac; "The Natural History of Clay"—By A. B. Searle; "Recollections of a Court Painter"—By H. Jones Thaddeus; "The Venetian School of Painting"—By Evelyn March Phillipps, 246. "A Book of Hand-Woven Coverlets"—By Eliza Calvert Hall; "Out of the Wreck I Rise"—By Beatrice Harra-den; "The Lovers"—By Eden Phillpotts; "Problems in Furniture Making"—By Fred D. Crawshaw, B. S. M. E.; "Successful Houses and How to Build Them"—By Charles E. White, Jr.; "Philippe Manor Hall"—By Edward M. Hall, L. H. D.; "Primer of Scientific Management"—By Frank B. Gilbreth; "The Hermitage of Hiroshige": A Glimpse at Japanese Landscape Art—By Dora Amsden and J. S. Happer; "Between Two Thieves"—By Richard Dehan; "Childhood": Pictures by Cecilia Bull Hunter and Caroline Ogden: Verses by Burgess Johnson; "A Mexican Journey"—By E. H. Blichfeldt; "Practical Sheet and Plate Metal Work"—By Evan A. Atkins, A. M. I. M. E., 365. "The Financier"—By Theodore Dreiser; "Mark Twain: A Biography"—By Albert Bigelow Paine; "Eve's Other Children"—By Lucille Baldwin Van Slyke; "Venus: To the Venus of Melos"—By Auguste Rodin; "King-Errant"—By Flora Annie Steele; "A Wanderer in Florence"—By E. V. Lucas; Three Books of Verse from the Thomas B. Mosher Press; "Collection of Prose and Verse," Chosen by the Editor of *Bibelot*; "The Silence of Amor": Prose rhythms by Fiona Macleod; "Lyrical Poems"—By Lucy Littleton; "Forge Work"—By William I. Ilgen; "The Winning of the Best"—By Ralph Waldo Trine; "Morning with Masters of Art"—By H. H. Powers, Ph. D.; "Tapestries, Their Origin, History and Renaissance"—By George Leland Hunter; "Joseph Pennell's Pictures of the Panama Canal"; "Famous Pictures"—By Charles L. Barstow; "William T. Richards' Masterpieces of the Sea"—By Harrison S. Morris; "Staircases and Garden Steps"—By Guy Cadogan Rothery, 490. "Mrs. Lancelot"—By Maurice Hewlett; "American City Government"—By Charles A. Beard; "Russian Wonder Tales"—By Post Wheeler; "Little Books about Old Furniture"—By A. E. Reveirs-Hopkins and by J. B. Blake; "Chats on Cottage and Farmhouse Furniture"—By Arthur Hayden; "Chats on Jewelry and Trinkets"—By Maciver Percival; "Theory and Practice of Teaching Art"—By Arthur Wesley Dow, 601. "The Reef"—By Edith Wharton; "Saturday in My Garden"—By H. Hadfield Farthing; "Trees in Winter"—By Albert Francis Blakeslee and Chester Deacon Jarvis; "The Old Gardens of Italy"—By Mrs. Aubrey Le Blond; "Garden Flowers in Color"; "Popular Garden Flowers"—By Walter P. Wright; "Dyes and Dyeing"—By Charles E. Pellew; "Industrial Mathematics"—By Horace Willner Marsh; "Photographic History of the Civil War"—By Francis Trewelyn Miller; "Illustrations of Design"—By Lockwood de Forest, 719.
- Borein, Ed. Stories of the Old West as Told and Painted by the Cow Puncher and Artist—By A. B. Stewart: Traditions of the American Indian; Stories of Indian life in the West, as told by Ed. Borein, the artist; His life and experiences among the Indians; His paintings a permanent expression of the life of the cow puncher and the winning of the West, 44.
- Brangwyn, Frank: Painter-Etcher—By Henry Reuterdaahl: As a decorator and etcher Brangwyn stands alone; A splen-

TOPIC INDEX

- did decorative sense, a sure draughtsman; Etching his pastime; His line direct and solid; An estimate of his work, 380.
- Bread, The Battle between White and Brown, 360.
- Brick Work, Practical: Ancient and Modern: Some Points for the Home-Builder, 347.
- Bridges of the Conococheague River—By Helen Ashe Hays: Bridges stand for neighborliness, security, traffic and intercourse; In temperate countries the rural bridge is at its best; Beauties of the bridges over the Conococheague, 306.
- Bringing the Woods to Town—By Lee McCrae, 240.
- Bulletins, Practical, Agricultural, 221.
- Bungalow, A Bachelor's: Bungalow designed by H. A. Hawthorne; A home solid, sensible, convenient, 595.
- Bungalow, A California, Planned for Comfort—By Laura Rinkle Johnson: Bungalow near Pasadena, California, planned by Louis B. Easton; A bungalow homelike, inexpensive and beautiful, 218.
- Bungalow, A Practical and Comfortable, Built by a Western Architect for His Own Home—By Charles Alma Byers: Bungalow built by Mr. E. B. Rust of Los Angeles; Five rooms and bath; The bungalow described, 95.
- Burbank, Luther, Increaser of Harvests, A Sketch of: What One Man Has Done to Lower the Cost of Living—By Eloise Roorbach: How Mr. Burbank has added to the yield and quality of our food products; A personal interview with the man who has changed the color of flowers at his will; His home life; His achievements, 131.
- "Call of the Carpenter, The": Mr. White's book constructive rather than destructive; A vital and human message, 122.
- Capturing Wild Flowers for the Home Garden: What can be accomplished by judicious naturalistic gardening; Directions for obtaining a wild-flower garden given by Mr. Merkel of the Zoological Park; The use of wildlings in the gardens of Mrs. O. H. P. Belmont, Mr. Whitelaw Reid and Mr. George Vanderbilt, 615.
- Certified Milk and Certified Boys—By Arthur D. Dean: Brother Barnabas and the Lincoln School; "Being like Abraham Lincoln and being a good dairy man," 680.
- "Chinatown, Old": A Vanished Beauty Spot of the West: A glimpse of "Old Chinatown" in Will Irwin's book, 540.
- Christmas Tree as a Symbol of Life, The: Also a Lesson in Conservation: No protection for the fir tree in America; Replanting the Christmas tree in France and Germany, 454.
- Coöperation in Denmark: Educating the Farmers to Rule the Nation—By Jacob Riis: Schools established in Denmark not to make money, but to make men; The teachers' personality in evidence; The Danish parliament one-third farmers; Coöperative work of the Danish farmers; What the farmer owes to the high schools, 609.
- Cornell Agricultural Experiment Station. Timothy and Corn Tests, 468.
- Country Life and the Old-Fashioned Farm, 107.
- Craftsmen, America's, The Year's Progress among: Sixth annual exhibit of the National Society of Craftsmen: Block printing and embroidery; Bronzes, pottery, jewelry, bookbinding and leather work, 580.
- Craftsman Farms, A Visit to: The Impression It Made and the Result: The Gustav Stickley School for Citizenship—By Raymond Riordon: Advantages which the American boy should have; Education should train to usefulness; A school where honest boys are to be nurtured into honest men, 151.
- Craftsman in France, A New and Great: the art of René Lalique; How he has rejuvenated the art spirit of France; Some examples of his work, 75.
- Craftsman Service to Subscribers, The The Scope of the New, 586.
- Decadence of the Practical Arts in France, The, 238.
- Designer of Dawns, A—By Gertrude Russell Lewis, 566.
- Does Vocational Training Fail to Mold Character or Create a Conscious Citizenship? A Study in Education—By Raymond Riordon: Plea for an all-around education; Vocational training will mean industrial slavery, 449.
- Do Parents Shirk Their Responsibilities? A Study of the Child in the Home—By Crawford Richmond Green, M.D.: The part that home life should play in the culture of the child; The functions of the parent cannot be carried out by deputy;

TOPIC INDEX

- Our neglect of psychical development conspicuous; Evil of the notorious Sunday supplements; Development of a child's moral sense exactly what we make it, 208.
- Dream of God, A: A Poem—By Marguerite O. B. Wilkinson, 323.
- "Dumblane," A Southern Craftsman Home: Home of Mr. and Mrs. S. Hazen Bond in the outskirts of Washington: A Craftsman house giving promise of solid comfort and genuine hospitality; House adapted from Craftsman house Number 10, published in 1904; The house described, 522.
- Eighty Acres and "Bondage": A Spiritual Investment—By Walter A. Dyer: The agriculturist leads the most enviable life; He deals in fundamentals; The joy of ownership; A glad bondage, 535.
- Fairs, Country, Educational Opportunities in, 228.
- Fairy Faith and Pictured Music of Pamela Coleman Smith, The—By M. Irwin MacDonald: Do sane, well-balanced people believe in fairies? Are we bridging the gulf? How materialistic knowledge and the visions of seers are becoming reconciled; The pictures of Pamela Coleman Smith; Her power to see and depict the subjective world, 20.
- Far Country, The: A Poem—By Edward Wilbur Mason, 19.
- Farm, A Schoolteacher's, in New Jersey—By Mary Rankin Cranston: The story of reclaiming an impoverished farm, 232.
- Farm, The Small, as a Financial Proposition—By W. H. Jenkins, 701.
- Farmer, American. *See* What the American Farmer Can Gain by Studying European Methods, p. 116.
- Fire Protection for the Home—By Agnes Athol and Agnes Blackwell Rainey: Advice to the woman in the home regarding fire conditions, 225.
- Flour Bin, The, 360.
- Food in the Home, The Preservation of: Lessons on food preservation issued by the Department of Home Economics at Ithaca, N. Y., 113.
- Food Waste: A Matter of Better Market Control, 355.
- Forestry, A Practical School for: The College of Forestry at Cornell; The courses offered, 103.
- Fountain of Joy, The: A Story—By Lucille Baldwin Van Slyke, 35.
- Freedom: The widening chasm between the church and the people; Our spiritual life not a thing apart; Life a process of becoming; Religion which voices the aspirations of a race or an individual is a true religion; Work and love must be dominant factors in the religion of a nation, 375.
- Frost Protection, Methods of, 237.
- Furniture, German, Some Digressions in, 241.
- Garden City Idea the World Over, The: What It Is and How It Grows—By Esther Matson: Essence of the Garden City movement is to give every inhabitant an interest in his holding; The garden city is for both the more and less wealthy; Garden cities in England and Germany, 420.
- Garden Features Suitable for Modern Homes, Picturesque—By Elizabeth C. Graham: Some interesting pergolas, gateways and seats, 99.
- Garden Management during March, 697.
- Garden Period, Prolonging the, by an Early Start: Starting vegetable and flower seeds indoors; Transplanting, 707.
- Garden Tools, A Few Words about, 699.
- Gardening, Index of Back Numbers of THE CRAFTSMAN Containing Articles on Gardening, 709.
- Gardens, Color Arrangement in: Its Importance and Problems; The color scheme of a garden; When and how to plan for it, 704.
- Gardens, Successful, Careful Planting Means, 715.
- Germany an Object Lesson in Civic Achievement: Work and Discipline the Secret of Her Success—By John Cory: Germany's rapid rise to riches, power and prestige; characteristics of the individual German: Sublime respect for authority, personal poise, individual content; Racial development result of compelling necessity for steady labor, the insistent demand for coöperation, self-sacrifice and civic loyalty, 12.
- God's Town, A Ballad of: A Poem—By Margaret Widdemer, 453.
- Guides, The: A Poem—By Margaret Widdemer, 165.
- Hand on His Shoulder, A: A Story—By Clarence Earle Fisher, 275.
- Home Building from an Individual, Practical Standpoint—By Gustav Stickley: The house should be itself and not an

TOPIC INDEX

- imitation of other houses; In planning a house, ample space should be provided for the social life of the family; Dining room and kitchen should be planned to minimize steps; Advice as to living and sleeping porches; House should represent the owner's endeavors and desires, 183.
- Home in the Kentucky Capital Built on Craftsman Lines: Home of Charles F. Strassner of Frankfort, Kentucky: A house sharing Craftsman characteristics, 222.
- Home They Brought Her Warrior: A Story—By Patience Bevier Cole, 514.
- Homes, Modern Country in England—By Barry Parker. Number 28: Final number of the series: Problem of rebuilding and adapting old houses to new needs, 60.
- House, A Craftsman, Built on a Kentucky Hillside: House of Mr. J. Gordon Smyth, at Van Lear, Ky., 104.
- Housecleaning, Scientific: Rules for work; How to systematize household processes, 353.
- House Designed to Meet Special Needs, A—By E. Drusille Ford: House designed by G. H. Ford; The house described, 343.
- House of Ghosts, The: A Poem—By Margaret Widdemer, 614.
- Houses, Craftsman: Two Simple, Homelike Craftsman Houses for City, Suburban or Country Life: House No. 145 of brick and shingles; Small, compact, moderate in cost; No. 146, concrete and field stone with shingle roof, 82. Craftsman Cottages Suited to Narrow Lots: Cement cottage No. 147; shingle cottage No. 148; Cottages adapted to narrow lots; Room arranged to secure an effect of space; Labor-saving and convenience to the housewife; The cottages described, 214. A Craftsman Cottage and Bungalow for Home-Builders of Simple Needs and Tastes: Craftsman houses Nos. 149 and 150; Craftsman cement house suited to severe winters and one-story shingled bungalow, 336. One- and Two-Family Craftsman Houses Combining Unusual Comfort and Economy of Construction: No. 151, A two-family house; No. 152, of concrete; The houses described, 463. Two Eleven-Room Craftsman Houses of Brick and Stucco, with Unusually Practical and Homelike Features: House No. 153 built along the lines of "Dumblane"; Tapestry brick used in its construction; House No. 154 of stucco and frame construction; Two Craftsman garages, 568. Two Shingled Houses Especially Designed for Craftsman Clients, but Readily Adaptable to Other Home-Builders' Needs: Craftsman houses, Nos. 155 and 156: Convenient and homelike rooms and satisfying exteriors, 688.
- How a Neighborhood Built Its Own Public School and Is Making It Self-Maintaining—By Raymond Riordon: The building of a school by the community; Making the school a central opportunity for beauty, use and service, 69.
- How Garden Walls Conserve the Home Feeling: Their Picturesque and Practical Value—By Alice Lounsbury: Walls not only convenient but decorative; The use of brick, stone and concrete walls for gardens and estates; The floral treatment of walls, 634.
- How Los Angeles Built the Greatest Aqueduct in the World: A Story of Interesting Municipal Activity—By Olga Brennecke: A great engineering feat carried out by the municipality of Los Angeles; The most profitable public utility in the world; How the great aqueduct was constructed, 188.
- How the Japanese Can Help You Make a Little Garden, 229.
- Interior Decorating Methods, The New, 244.
- Lawn and Its Care, The: How to prepare successfully and care for a lawn; The ideal lawn, 695.
- Lesson in Darning Filet Net, A, Illustrated with Original Craftsman Designs, 356.
- Life: A Poem—By Paul Lorrilliere, 150.
- Links of Love, The A Story—By A. R. Goring-Thomas, 166.
- Making Our Bird Friends at Home: How we may win back the birds to our gardens; Bird houses, drinking and bathing pools, food, 475.
- Migration of Birds, The—By T. Gilbert Pearson: The migrating passion; The cause for migration is conjecture; The home instinct of migratory birds, 643.
- "Moonlight Schools" in the Kentucky Mountains, 118.
- Music America Buys, The: What the New York Season Offers in Many Fields—By Natalie Curtis: Five orchestras supported by New York; We import music from everywhere and concerts are within reach of all classes; The Concerts for Young People; Work of Mr. Walter

TOPIC INDEX

- Damrosch; The Music School Settlements; Opera in New York; Chamber Music; Choruses; The Schola Cantorium, 390.
- Music of America, The Negro's Contribution to: The Larger Opportunity of the Colored Man of Today—By Natalie Curtis: Rag-time the real American music; Negro music; Folk melodies of the plantation; Music School Settlement for Colored People in New York; The "Clef Club"; The song of the American Negro, 660.
- Notes: American Life by American Painters; Third Exhibition of the Society of Illustrators at the National Arts Club, 372. The Impersonal Note in the American Home; An Exhibition of Vital Significance; Neighborhood Uplift; Overheated Schoolrooms, 604. At the Folsom Galleries; Some of the Best Recent Exhibitions; An Art Event, 724.
- Palms, For Thrifty, Glossy, 706.
- Parcels Post System, Our, 244.
- Parted: A Poem—By Olive Hyde Foster, 558.
- Passage: A Poem—By Charles Hanson Towne, 182.
- Pergolas. *See* Garden Features Suitable for Modern Homes, Picturesque, p. 99.
- Photography, Adventures in: The camera a source of artistic development; Exhibition of photography in America, at the Montross Art Galleries, 316.
- Pictures through a Pinhole—By Guy R. and Helen Queen Stewart: What has been accomplished in pinhole photography, 109.
- Pittsburgh's Wilderness Homes—By J. M. Miller: A study of the primitive cabins built in the wilderness a century ago; Pioneers' cabins described; History of the cabins which the city owns, 587.
- Planning the Garden on Paper, 716.
- Planning the Home Grounds for Beauty and Comfort—By Ralph Rodney Root, B. S. A.: Duties of the landscape architect; How he goes about his work; How grounds are correctly designed and planted; A proposed "improvement scheme"; The pleasure of the formal garden, 88.
- Plants that Are Poisonous, Common, 102.
- Portraiture and Originality: The Lithographs of Henrik Lund—By Henry Reuterdaahl: Two ways of painting, one by inspiration, one by tender and never-ending devotion; The art of Henrik Lund; His portraiture; Lithographs; A word as to his technique, 628.
- Pruned Fruit Twigs for Bloom, Utilizing, 698.
- Rackham, Arthur, the Illustrator of Folk-Lore and Fairy Tales: Rackham the greatest English illustrator; His imagination touched by the fairy world; His knowledge of the fairy world and the animal kingdom; Some of the more notable of his illustrations, 141.
- Rain at Twilight: A Poem—By Edward Wilbur Mason, 196.
- Reading Courses for Farm and Home, The Cornell, 342.
- Recreation Centers in Cities: Recreation centers in New York; Dr. Edward Stitt in charge; Amusements, singing clubs, folk dancing, social clubs; Trophy presented by Miss Anne Morgan to the vocal clubs, 598.
- Rescuing Our National Festivals—By Jacob Riis: The giant Christmas tree in Madison Square, New York; Its message, 497.
- Robin, The, and Its Treatment in the South—By T. Gilbert Pearson: The American robin a companion of man; Bill in Legislature of Virginia for protection of the robin; Game laws in various States, 54.
- Schools, Agricultural Extension: Massachusetts Agricultural College in Ashfield, 600.
- Seed Cultivation, Scientific: Hugo de Vries, the world's greatest botanist; Lectures at the Brooklyn Institute and the New York Botanical Gardens; Discoveries in seed culture by Dr. de Vries; Work carried on at experiment stations; The laboratory farmer, 478.
- Singing Mothers—By Anne P. L. Field, 197.
- Socialist, The: A Story—By Marie Louise Van Saanen, 401.
- Song of the Birch Canoe, The—By Charles A. Eastman (Ohiyesa): Ceremonies attending the building and launching of the first canoe, 3.
- Stenciling Simple House Furnishings, Craftsman Designs for: How stenciling may be used in home decoration: How a cheerful note of color may be added here and there in the home at little expense; Suggestions in regard to tools, materials and dyes, 469.
- Sweden, a Nation of Craftsmen—By Henry Goddard Leach: The Swedish peasant and his industries; The Friends of Handiwork established in 1874; The Home

TOPIC INDEX

- Sloyd Union; The revival of native dress; the renaissance of the fine arts, 295.
- Swimming Pool, the Garden, The Charm and Usefulness of—By Charles Alma Byers: Little attention thus far paid to the garden swimming pool; The various uses to which such a pool could be put; Possibilities of pools in private gardens; Examples, 201.
- Swimming Pool, Water-Proofing the, 342.
- Town that Owns Its Own Theater, A: Municipal theater presented to Northampton by E. H. R. Lyman; The people's players in a people's playhouse, 481.
- Training Women for a New Civilization: How the Camp Fire Girls Acquire Efficiency and Romance through Their Contact with Nature: The Camp Fire Movement; Its meaning; Ceremonies; Honors; What a Camp Fire girl needs to know; States which have already established Camp Fires; Work of the President, Dr. Luther H. Gulick, 553.
- Trees, Protecting the, 364.
- Vessels of Clay and Flowers of the Field—By Helen Lukens Gant: Pueblo Indians of New Mexico the second best pottery makers in the world; Pottery of China and Japan; The use of pottery for flowers, 483.
- Water-Color Painters Who Have Escaped Tradition, Some: Water-Color Club Show in New York; Originality of spirit needed with a greater freedom from traditional influences, 413.
- Water Gardens, Natural and Artificial—By George V. Nash: Water gardens and water plants; Natural and artificial ponds; The pond border; The arrangement and planning of the water garden; Examples, 648.
- What the American Farmer Can Gain by Studying European Methods, 116.
- What the Birds Do in Winter—By T. Gilbert Pearson: Winter habits of the birds who stay North; Their hardships and sufferings; Their methods of self-protection, 547.
- What to Prune and How to Spray: Advice as to intelligent and proper pruning and spraying of trees and shrubs, 711.
- What Women Can Do to Prevent Fires in the Home—By Agnes Athol: Simple precautions against fire; Advice to the housekeeper, 578.
- When He Needed Help—By Marguerite O. B. Wilkinson, 379.
- Winter Festivals of Mexico: A Christmas that Combines Aztec and Christian Legends—By Wilhelmine Weber: Mexico rich in fantastic religious festivals founded by the Aztec Indians on Christian legends; Guadalupe the Mecca of Mexico; Survival of ancient customs; The festivals described, 266.
- Wisdom: A Poem—By Margaret Widemer, 281.
- Work and a Christmas Song—By Eloise Roorbach, 265.
- Yosemite, In the, with John Muir—By Clara Barrus: John Muir a picturesque figure in our country; Mr. Muir's book on the Yosemite; An intimate portrayal of John Muir and his characteristics, 324.

INDEX OF PERSONS

	PAGE		PAGE
Abbott, E. E.	581 et seq.	Brennecke, Olga	188
Adams, Herbert	500	Browne, Francis	327
Adams, Maurice B.	127	Brush, Dr. F.	560
Adlersparre, Baroness	296	Burbank, Luther	131 et seq.
Aitken, Robert	559	Burleigh, Henry T.	665
Akin, Louis	676 et seq.	Burton, Dr. Marion	482
Altschuler, Modest	390	Butler, Jefferson	313
Amato	395	Byers, Charles Alma	95, 201
Amsden, Dora	369	Cadbury, Mr.	425
Andersen, Hans Christian	289	Carrington, Thomas S.	247
Archbold, John D.	245	Chapman, Ernest D.	367
Arens, Franz X.	390	Chase, William	565 et seq.
Atkins, Evan A.	370	Clauss, Berthold	511
Baker, George	482	Claxton, Dr. P. P.	57
Balzac, Honore de	248	Coburn, Alvin Langdon	317 et seq.
Bannon, Charlotte	482	Cole, Patience Vevier	514
Barlach, Ernst	506 et seq.	Coleridge-Taylor, Samuel	665
Barnabas, Brother	681	Collier, Robert J.	380
Barnett, Mrs.	420	Cook, Will Marion	666
Barrus, Clara	324	Cook, Prof. W. W.	646
Barstow, Charles L.	494	Cornoyer, Paul	565
Baumgarten & Co.	582	Cory, John	12
Beard, Charles A.	602	Couse, Irving	565
Beaux, Cecelia	565	Cowley, Abraham	535
Beethoven	30	Crane, Frank	248
Bellows, George	560	Crane, Walter	33
Belmont, Mrs. O. H. P.	625	Cranston, Mary Rankin	232
Bergson, Henri	376	Crawshaw, Fred D.	368
Birnbaum, Martin	505	Cros, Henri	81
Bitter, Karl	560	Curtis, Charles H.	722
Bjorkman, Olaf	560	Curtis, Natalie	390, 660
Blake, J. B.	602	Damrosch, Dr. Leopold	390
Blichfeldt, E. H.	370	Damrosch, Walter	392
Blumenschein, Mary Greene	564 et seq.	Dangerfield, Miss Elizabeth	366
Boberg, Anna	294, 439 et seq.	D'Anvers, Caleb	249
Boberg, Ferdinand	439 et seq.	Davies, Arthur B.	605
Bond, Mr. and Mrs.	522 et seq.	Dean, Arthur D.	680
Bonsville, Miss Jessie	482	Debussy	28
Booth, Commander Eva	500	de Forest, Lockwood	723
Borein, Ed.	44 et seq.	Dehan, Richard	360
Bori, Lucretia	397	de Vries, Hugo	478
Borton, Francis S.	263	Dickinson, G. Lowes	378
Bouquet, Colonel Henry	588	Dow, Arthur Wesley	603
Bowman, Col. A. M.	55	Dreiser, Theodore	490
Bradstreet, John S.	115	Dulk, Robert	583
Brangwyn, Frank	opp. 375, 380 et seq.	Dvorak	665

	PAGE		PAGE
Dyer, Walter A.....	535	Happer, J. S.....	369
Dykes, W. Rickalson.....	721	Harraden, Beatrice	368
Eastman, Charles A.....	3	Haupt, Louis	598
Easton, Louis B.....	218	Hawthorne, Charles	565
Eberle, Abastenia St. Leger.....	560	Hawthorne, H. A.....	595
Edwards, George Wharton.....	413 et seq.	Hay, M. E.....	140
Elder-Duncan, J. H.....	127	Hays, Helen Ashe.....	306
Elman, Mischa	399	Hays, Willet M.....	479
Emmet, Lydia Field.....	565	Hazellius, Arthur	296
Eugen, Prince	286 et seq.	Hennessey, A. J.....	584
Fabre, J. H.....	247	Herreshof, Mrs. J. B. F.....	498
Farthing, H. Hadfield.....	720	Hewlitt, Maurice	601
Farrar, Geraldine	394	Hicks, Isaac	461
Field, Anne P. L.....	197	Hinton, Charles Louis.....	559
Field, Edwin Avery.....	259	Hoffman, Harry	560
Fisher, Clarence Earle.....	275	Hoffman, Miss Malvina.....	559
Fiske, John	623	Homer, Winslow	288 et seq.
Fjord, Niels Johannes.....	613	Howard, Ebenezer	425
Flach, Pauline Bancroft.....	125	Hunter, Cecelia Bull.....	370
Foot, Mary	560	Hunter, George Leland.....	493
Forbush, E. H.....	436	Ilgen, William L.....	492
Forbes, General	591	Irving, Washington	147
Forbes, Professor	435	Irwin, Miss Patricia.....	604
Ford, E. Drusille.....	343	Irwin, Will	540
Ford, G. H.....	343	Jacacci, August	560
Ford, Henry	312	Jacob, Rev. Joseph.....	721
Forsythe, Miss Margaret.....	587	Jaeger, Hans	628 et seq.
Forsythe, William	590	Jarvis, Chester Deacon.....	720
Foster, Olive Hyde.....	558	Jenkins, W. H.....	701
Franck, Cesar	30	Johansen, John C.....	560
Fraser, J. E.....	560	Johansen, Viggo	289
Fremstad, Olive	393	Johnson, J. Rosamond.....	607
Frick, H. C.....	245	Johnson, Laura Rinkle.....	218
Frieske, Frederick	560	Joncaire, Alphonse	590
Fry, S. E.....	560	Jones, Francis	563
Gantt, Miss Peggy	560	Jones, Dr. William.....	7 et seq.
Garrett, Edmund	413 et seq.	Judd, Dr.	234
Gaul, August	508	Kalbfus, Dr. Joseph.....	314
Gaut, Helen Lukens.....	483	Kampf, Arthur	594
Genthe, Dr. Arnold	321, 540 et seq.	Käsebier, Mrs. Gertrude.....	321
Genth, Lillian	505	Kelley, Herbert	585
Gilbert, C. Allen.....	372	Kellogg, Mrs. Charles.....	132
Gilbreth, Frank B.....	369	Kellogg, Julia B.....	580 et seq.
Glackens, William	372	Keyes, Charles H.....	606
Glaspell, Susan	246	Kimball, Alonzo	560
Goring, Thomas A. R.....	166	Kimball, Benjamin	585
Gould, George J.....	245	King, Frederick Allen.....	24 et seq.
Graham, Elizabeth C.....	99	Klinger, Max	512
Greene, Crawford Richmond.....	208	Koemmenich, Louis	399
Greiner, Otto	505	Kold, Kristen	610
Grieg	27	Kollwitz, Käthe	509
Gruntvig, Nikolaj Frederik Severin.....	610	Kraushaar, C. W.....	381 et seq.
Gulick, Dr. Luther H.....	557	Kreisler, Fritz	399
Haggin, Ben Ali.....	560	Kroagh, Christian	294, 631
Hayden, Arthur	603	Lagerlöf, Selma	125, 302
Hall, Eliza Calvert.....	365	Lalique, René	75 et seq.
Hall, Sally	593	Lang, Annie Traquair	565
Hanna, Mark	364	Larsen, Hanna Astrup.....	439
		Larsson, Carl	288 et seq.

	PAGE		PAGE
Laurin, Karl	294	Nooe, Hon. Bennett	56
Leach, Henry Goddard	295	Noyes, William	247
Leamy, Edmund	126	Oberwarth, L. L.	222
Le Blond, Mrs. Aubrey	721	Ogden, Caroline	370
Lever, Mr.	425	Olbrichi, Alexander	512
Lewis, Gertrude Russell	566	Paine, Albert Bigelow	490
Libby, G. L.	234	Parker, Barry	60, 125
Liljefors, Bruno	291 et seq.	Parker, Judge	245
Lincoln, Abraham	682 et seq.	Parkinson, Edward K.	116
Lorrilliere, Paul	150	Patten, Dr. Simon N.	487 et seq.
Lounsberry, Alice	634	Paulsen, Julius	289
Lucas, E. V.	492	Payne, C. Harmon	722
Luks, George	371	Payne, Mrs. William	583
Lum, Bertha	585	Peacock, E. F.	585
Lummis, Charles F.	484	Pearce, Edgar	565
Lund, Henrik	285, 628 et seq.	Pearson, T. Gilbert	54, 236, 311, 432, 547, 643
Luther, Martin	454	Pellew, Charles E.	722
Lyman, E. H. R.	481	Pennell, Joseph	493
Lyman, Frank	481	Percival, Maciver	603
MacDonald, M. Irwin	20	Phillips, Evelyn March	248
Macomber, E.	583	Phillips, J. Campbell	560
Mann, Gov. William Hodges	56	Phillpotts, Eden	368
Mannes, David	397	Pierce, Chauncey	482
Marcel	386	Poinsett, Mr.	674
Marsh, Horace Willmer	723	Poullain, Mrs. J. P.	585
Marshall, F. J.	583	Powell, William B.	449
Marshall, Mrs. Gibbs	662	Powers, H. H., Ph. D.	493
Mason, Edward Wilbur	19, 196, 322	Pralterstrom, Martha	300
Matson, Esther	420	Preston, May Wilson	372
Maurer, Alfred H.	726	Preston, James	560
McAtee, W. L.	59, 236	Pulitzer, Joseph	392
McCallister, Peter	592	Rackham, Arthur	141
McCormack, John	391	Rainey, Agnes Blackwell	225
McCrae, Lee	240	Rothery, Guy Cadogan	494
McGinty, Billie	44	Reid, Whitelaw	626
McIlhenny, E. I.	311	Reinhart, Max	239
McLane, Jean	565	Reisinger, Hugo	632
Merkel, Herman W.	615	Reuterdaahl, Henry	282, 372, 380, 628
Miall, Bernard	247	Reveirs-Hopkins, A. E.	602
Miller, Frank A.	255 et seq.	Richards, William T.	494
Miller, Francis Trewelyn	723	Riis, Jacob	497, 609
Miller, Henry	482	Rimpau, Mr.	479
Müller, J. M.	587	Rion, Hanna	670
Milles, C.	284	Riordon, Mrs.	15 et seq.
Molin, Pelle	293	Riordon, Raymond	69, 120, 151, 449
Morgan, Miss Anne	598	Robinson, M. F.	559
Morgan, J. P.	245	Rodes, Miss Sally	366
Morris, Harrison S.	494	Rodin, Auguste	491
Mosher, Thomas B.	492	Rogers, Mrs. S. G.	365
Muir, John	324 et seq.	Roorbach, Eloise	131, 255, 265
Mulholland, William	194	Roosevelt, Theodore	245, 362, 629
Munch, Edvard	288	Root, Ralph Rodney, B. S. A.	88
Manz, Gustav	585	Ruffo, Tita	391
Myers, Jerome	371	Russell, Charles	44
Myers, Mrs. Jerome	725	Russell, Clark	386
Nash, George V.	648	Rust, E. B.	95
Neal, Robert	590	Sage, Mrs. Russell	312
Nielson, Einar	289	Sanford, Edward Field, Jr.	559
Nolen, John	127		

	PAGE		PAGE
Scarpitta, Cartaino	559	Van Saanen, Marie Louise.....	401
Schindler, Kurt	398	Van Slyke, Lucille Baldwin.....	35, 491
Schmidt, Max E.	249	Vasa, Gustavus	289
Schribeaux, Professor	479	Vogeler, Heinrich	510
Schumann	28	Von Hofmann, Ludwig	501
Searle, A. B.	248	Vonnoh, Bessie Potter.....	560
Seidl, Anton	391	Voysey, C. F. A.....	174 et seq.
Shea, Charles E.	722	Wagner	27
Seeley, George H.	319	Wahlin, Karl	288
Sloan, John	371	Walcott, H. M.	561
Smith, Charles Sprague.....	598	Walden, Lionel	565
Smith, Horace	114	Walker, Horatio	opp. 131
Smith, Pamela Coleman.....	20 et seq.	Ward, Charles W.	312
Smyth, J. Gordon.....	104	Waring, L.	584
Spaulding, F. G.	482	Watson, Mary Urie.....	353
Speicher, Eugene	560	Weber, Max	321
Spencer, Herbert	376	Weber, Wilhelmine	266
Squire, Miss	413 et seq.	Wentz, W. Y. Evans.....	22
Stanford, Sir Charles.....	665	Wharton, Edith	719
Steele, Flora Annie.....	492	Wheeler, Post	602
Stevenson, Thomas	722	Whitbeck, H. S.	583
Stewart, A. B.	44	White, Bouck	122, 375
Stewart, Mrs. Cora.....	118	White, Charles E., Jr.....	369
Stewart, Guy R.	109	White, Clarence H.	320
Stewart, Helen Queen.....	109	Widdemer, Margaret.....	165, 281, 453, 614
Stickley, Gustav.....	151 et seq., 183	Wiggins, Guy C.	565
Stitt, Dr. Edward.....	598	Wiles, Irving	560
Stoddard, Alice Kent.....	565	Wilkinson, Marguerite O. B.	323, 379, 675
Stoddard, Charles Warren.....	256	Wilmer, Robert	232
Stransky, Joseph	390	Wilson, Lawrence	593
Struss, Carl	318	Wilson, Woodrow	362, et seq. 599
Strassner, Chas. F.	222	Woodruff, Miss Corine.....	585
Sulzer, William	562	Wood, Professor	360
Swenson, Gustavus	589	Wright, Walter P.	722
Terry, Ellen	31	Yeats, William Butler.....	21
Thaddeus, H. Jones.....	248	Yellin, Samuel	585
Timmons, John T.	98	Young, Arthur	420
Towne, Charles Hanson.....	182	Young, Mahonri	413 et seq.
Trine, Ralph Waldo.....	493	Ysaye	399
Vanderbilt, George	626	Zorn, Anders.....	283 et seq. 629 et seq.
Van Glehn, Wilfred.....	560		